

## FAIRBANKS FORECAST

AKZ222-210330-

MIDDLE TANANA VALLEY-

INCLUDING...FAIRBANKS...FORT WAINWRIGHT...EIELSON AFB...ESTER...NORTH POLE...MOOSE CREEK...TWO  
RIVERS...FOX...CHATANIKA...CHENA HOT SPRINGS...SOURDOUGH CAMP

429 AM ADT SUN APR 20 2008

.TODAY...DECREASING CLOUDS. HIGHS 50 TO 60. LIGHT WINDS.

.TONIGHT...PARTLY CLOUDY. LOWS 25 TO 35. LIGHT WINDS.

.MONDAY...PARTLY CLOUDY. HIGHS 55 TO 60. LIGHT WINDS.

.MONDAY NIGHT...PARTLY CLOUDY. LOWS AROUND 30. LIGHT WINDS.

.TUESDAY...PARTLY CLOUDY. HIGHS 60 TO 65. LIGHT WINDS.

.TUESDAY NIGHT...PARTLY CLOUDY. LOWS NEAR 35.

NORTHERN ALASKA FORECAST DISCUSSION  
NATIONAL WEATHER SERVICE FAIRBANKS AK  
537 AM ADT SUN APR 20 2008

.SYNOPSIS...

THE HIGH PORTION OF A REX BLOCK IS NOW OVER ALASKA AND WILL INCREASE IN HEIGHT TODAY AND PERSIST INTO WED. THIS WILL CAUSE 850 MB TEMPERATURES TO RISE ABOVE FREEZING OVER THE INTERIOR AND WEST COAST TODAY...AND PERSIST INTO WED OVER THE INTERIOR.

A 1012 MB LOW 300 NM NORTH OF BARTER ISLAND WILL MOVE NORTHEAST. FLURRIES, BLOWING SNOW AND WEST WINDS 25 KT ALONG THE EASTERN ARCTIC WILL DIMINISH TODAY AS THE LOW MOVES EAST.

A WEATHER FRONT FROM THE LOW TO BARTER ISLAND TO THE BERING STRAIT WILL MOVE TO BARTER ISLAND TO POINT LAY BY 4AM MON AND TO BARTER ISLAND TO BARROW BY 4PM MON. THERE IS MIXED RAIN AND SNOW WITH THIS FRONT ALONG THE WEST COAST WHICH BECOMES MORE ISOLATED INLAND. THE PRECIPITATION WILL DIMINISH TONIGHT AS THE RIDGE ALOFT BUILDS. OVER THE INTERIOR WILL SEE CLEARING DECREASING CLOUDS SOUTH OF THE FRONT.

A LOW IN THE SOUTHEAST BERING SEA WILL MOVE TO THE CENTRAL BERING SEA BY 4PM SUN AND THEN SLOWLY WEAKEN. A WARM FRONT FROM THIS LOW TO THE SEWARD PENINSULA WILL MERGE WITH THE PREVIOUSLY MENTIONED FRONT OVER THE SOUTHERN CHUKCHI SEA TONIGHT. RAIN AND SNOW NORTH OF THE FRONT WILL DIMINISH SOUTH OF THE FRONT. EXPECT ANOTHER 1 INCH OF SNOW NORTH OF THE FRONT.

AN ASSOCIATED COLD FRONT IN THE SOUTHERN BERING SEA WILL MOVE TO THE NORTHERN BERING SEA BY 4PM SUN...AND TO THE BERING STRAIT TO NUNIVAK ISLAND BY 4AM MON...AND THEN DIMINISH. THIS WILL BRING RAIN AND SNOW TO THE WESTERN CAPES LATER TODAY INTO MON ALONG WITH SOUTHEAST WINDS 20-30 KT.

&&

.DISCUSSION...

AT 500 MB MODELS INITIALIZE WELL AND SHOW SIMILAR SOLUTIONS. AT THE SURFACE THE NAM VERIFIES TOO WEAK ON THE LOW NORTH OF THE ARCTIC COAST AT 06Z WHILE THE GFS VERIFIED VERY WELL. THE ECMF WAS SIMILAR TO THE GFS. FOR THESE REASONS FAVOR THE GFS SOLUTION.

## **BARROW FORECAST**

NORTHERN ARCTIC COAST-  
INCLUDING...BARROW...ALAKTAK...PITT POINT...NULAVIK  
417 AM ADT SUN APR 20 2008

.TODAY...MOSTLY CLOUDY WITH SCATTERED FLURRIES. AREAS OF BLOWING SNOW. HIGHS 20 TO 25.  
NORTHWEST WINDS 10 TO 20 MPH.

.TONIGHT...MOSTLY CLOUDY. FLURRIES AND PATCHY FOG. LOWS 15 TO 20. EAST WINDS 10 TO 20 MPH.

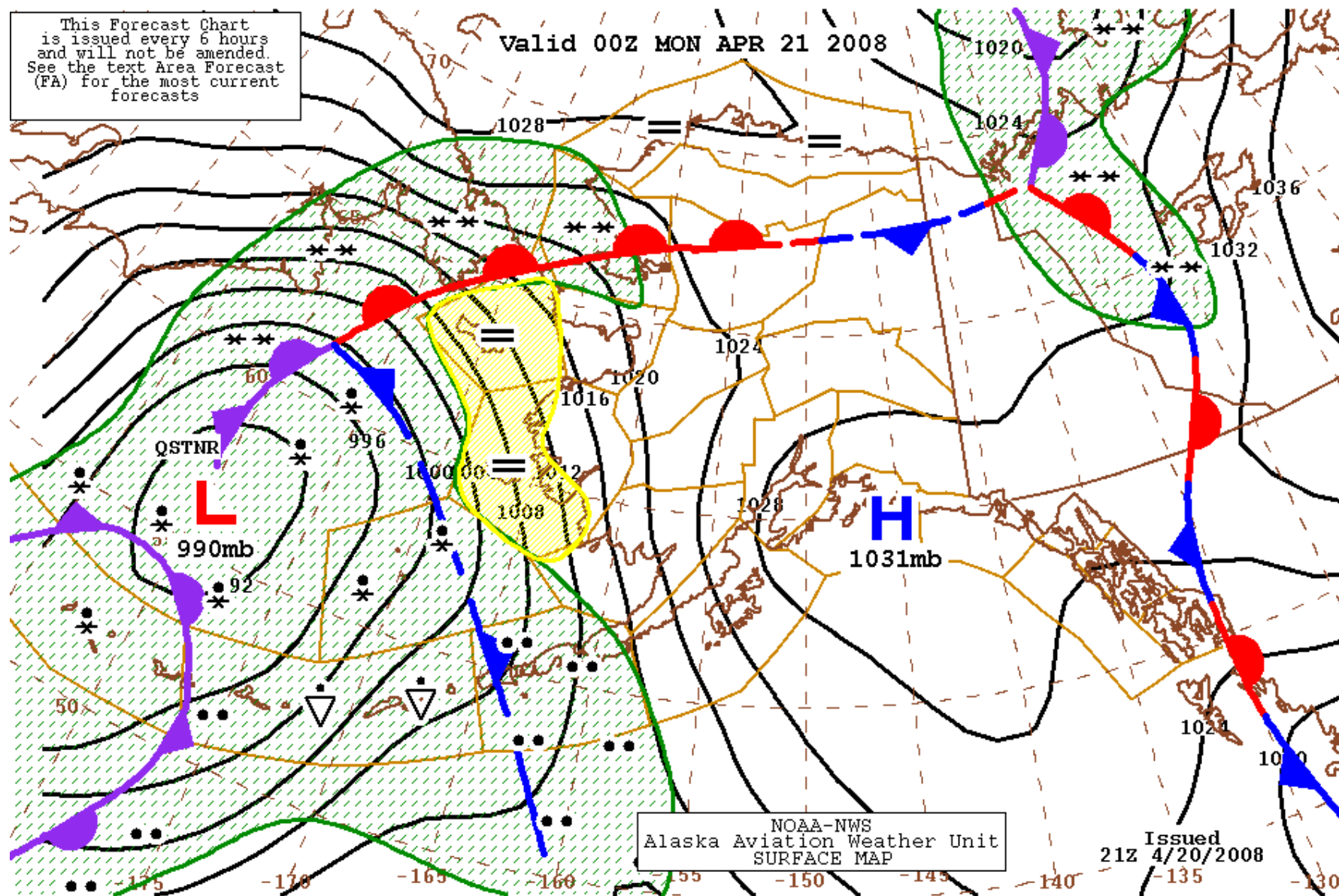
.MONDAY...CLOUDY. PATCHY FOG. HIGHS 25 TO 30. SOUTHEAST WINDS 15 TO 25 MPH.

.MONDAY NIGHT...MOSTLY CLOUDY. LOWS AROUND 15. SOUTHEAST WINDS 15 TO 20 MPH.

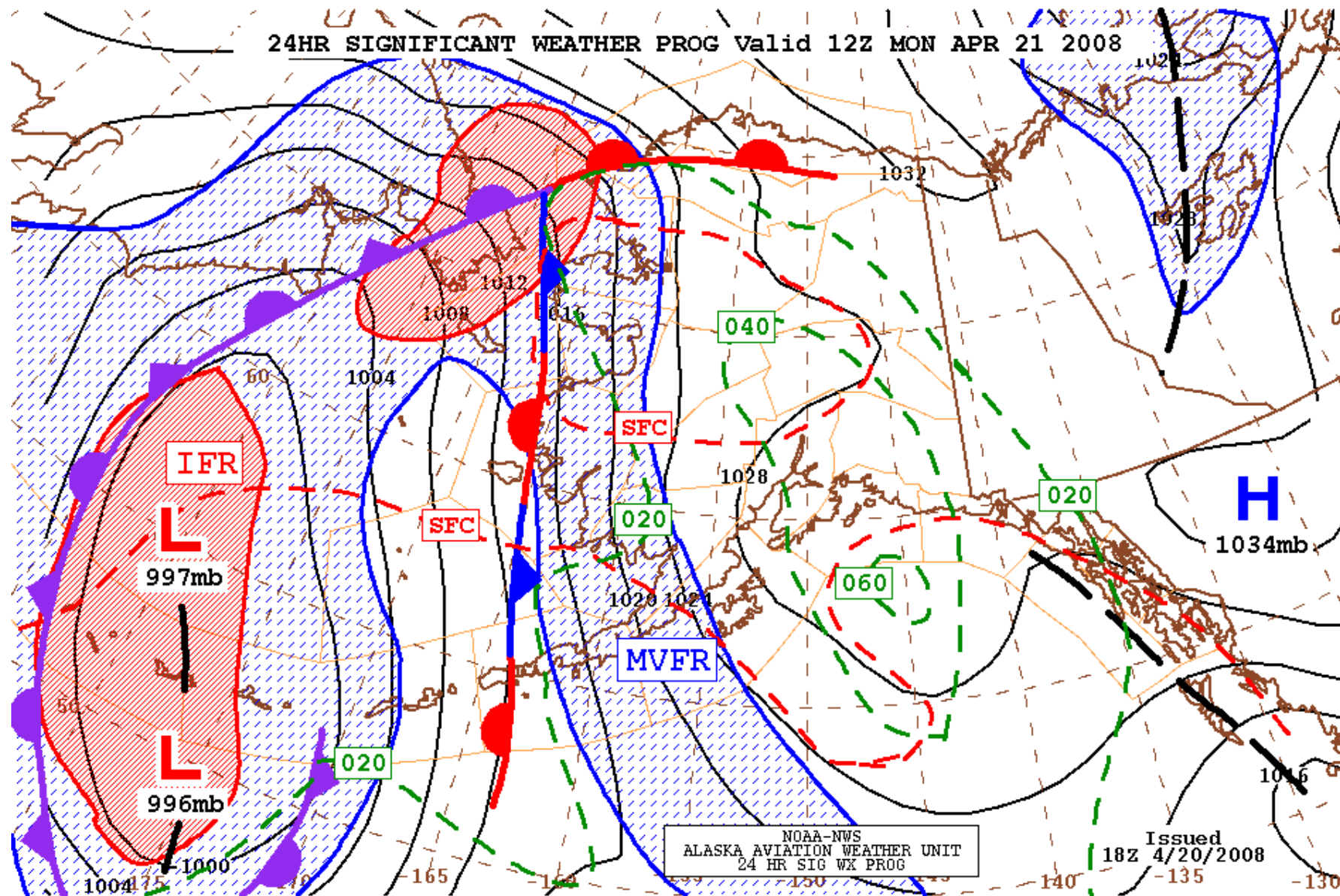
.TUESDAY...MOSTLY CLOUDY. HIGHS 30 TO 35. SOUTHEAST WINDS AROUND 15 MPH.

.TUESDAY NIGHT...MOSTLY CLOUDY. LOWS NEAR 20.

Valid 00Z MON APR 21 2008



24HR SIGNIFICANT WEATHER PROG Valid 12Z MON APR 21 2008



NOAA-NWS  
ALASKA AVIATION WEATHER UNIT  
24 HR SIG WX PROG

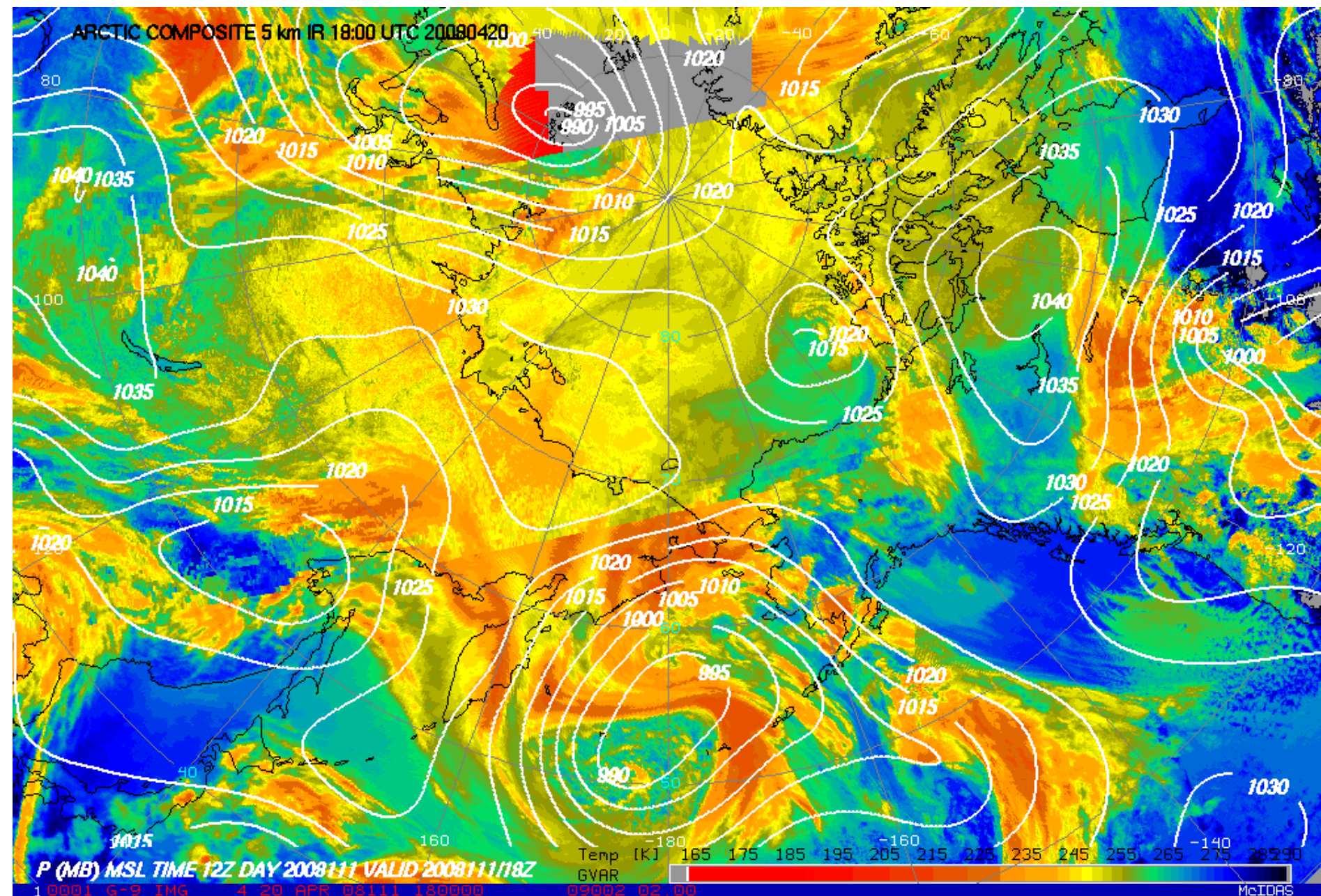
Issued  
18Z 4/20/2008

NOAA-NWS  
ALASKA AVIATION WEATHER UNIT  
36 HR SIG WX PROG

18Z Issued 4/20/2008



ARCTIC COMPOSITE 5 km IR 18:00 UTC 20080420



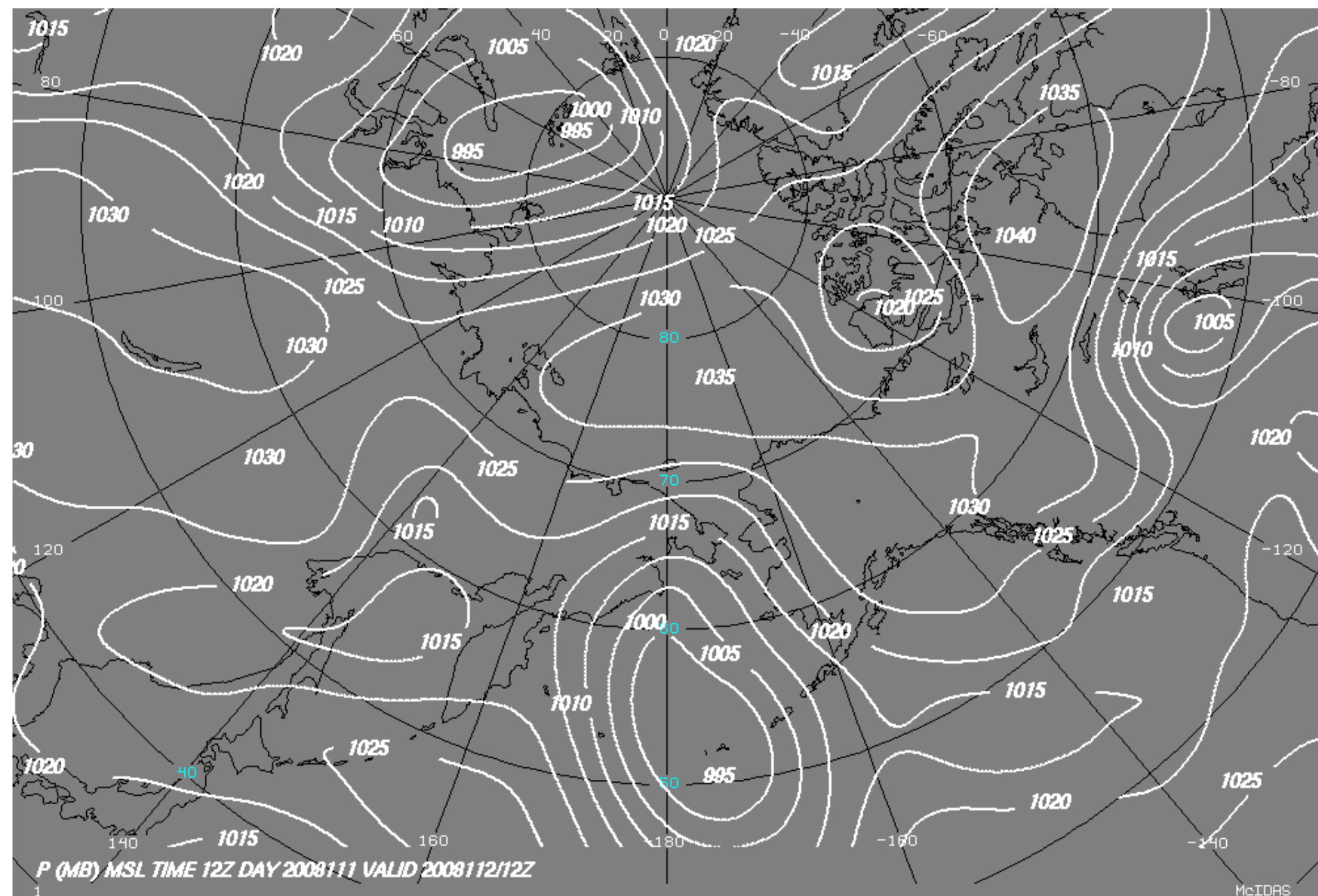
P (MB) MSL TIME 12Z DAY 2008111 VALID 2008111/18Z

1 0001 G-9 IMG

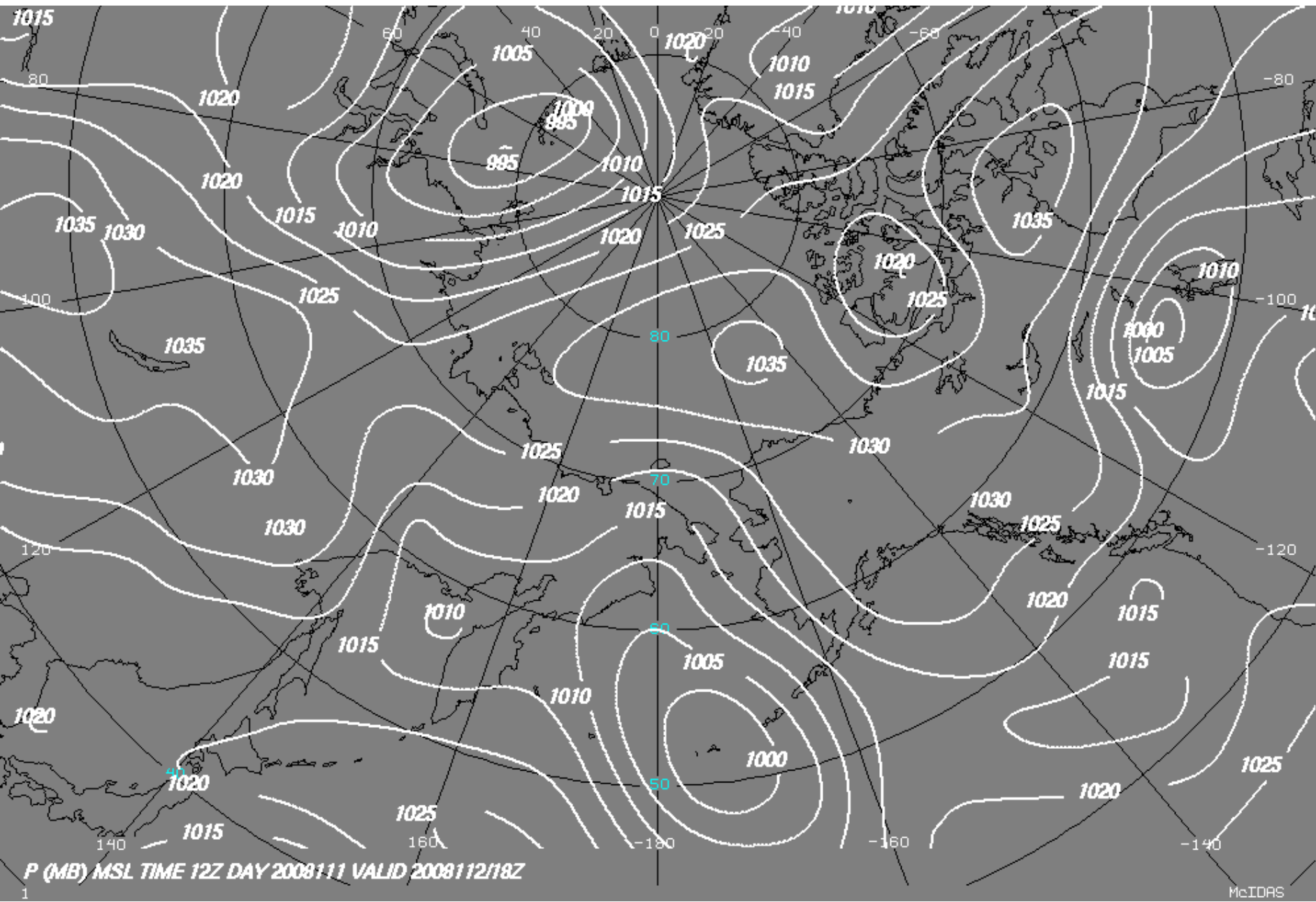
4 20 APR 08111 180000

09002 02.00

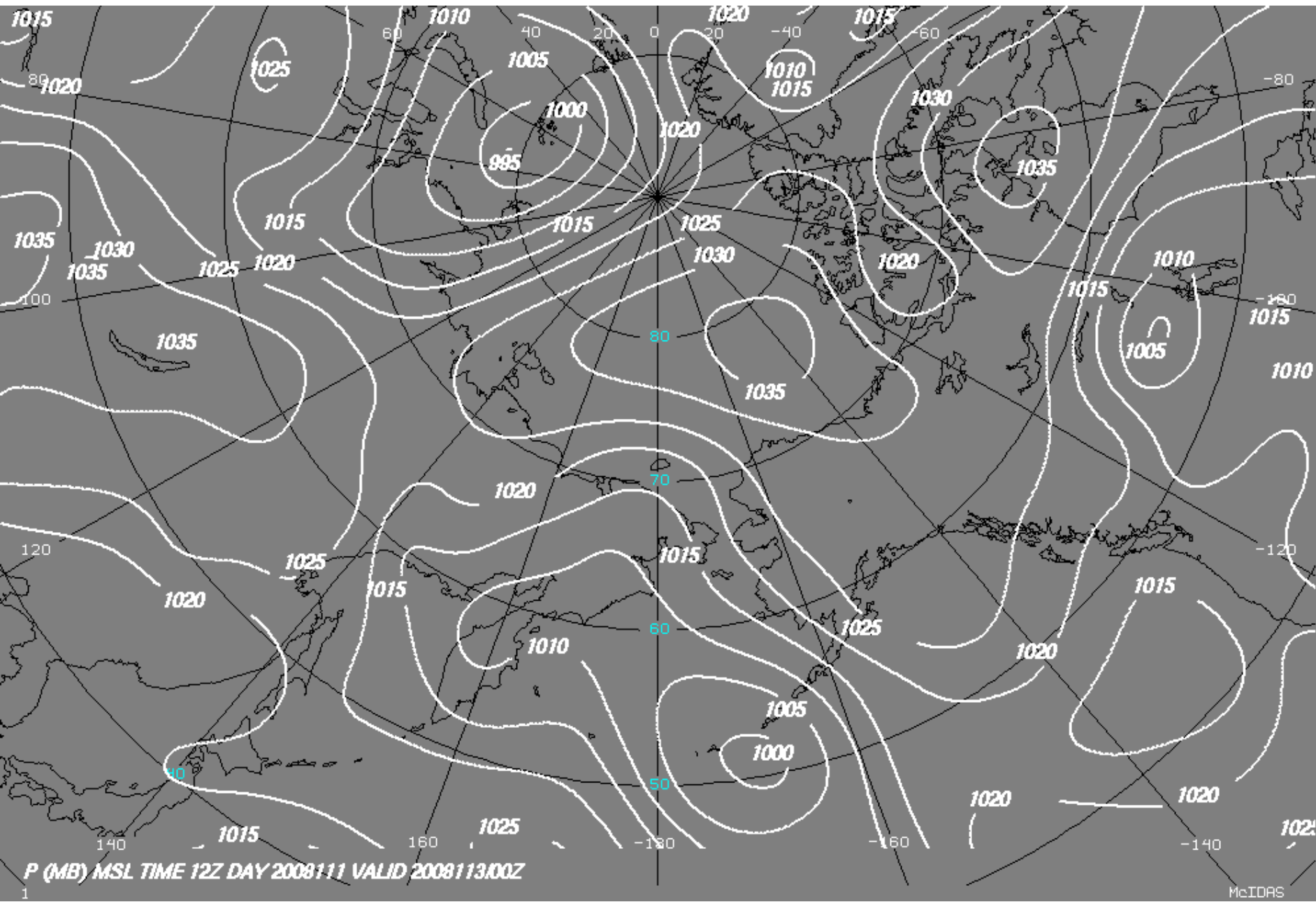
McIDAS



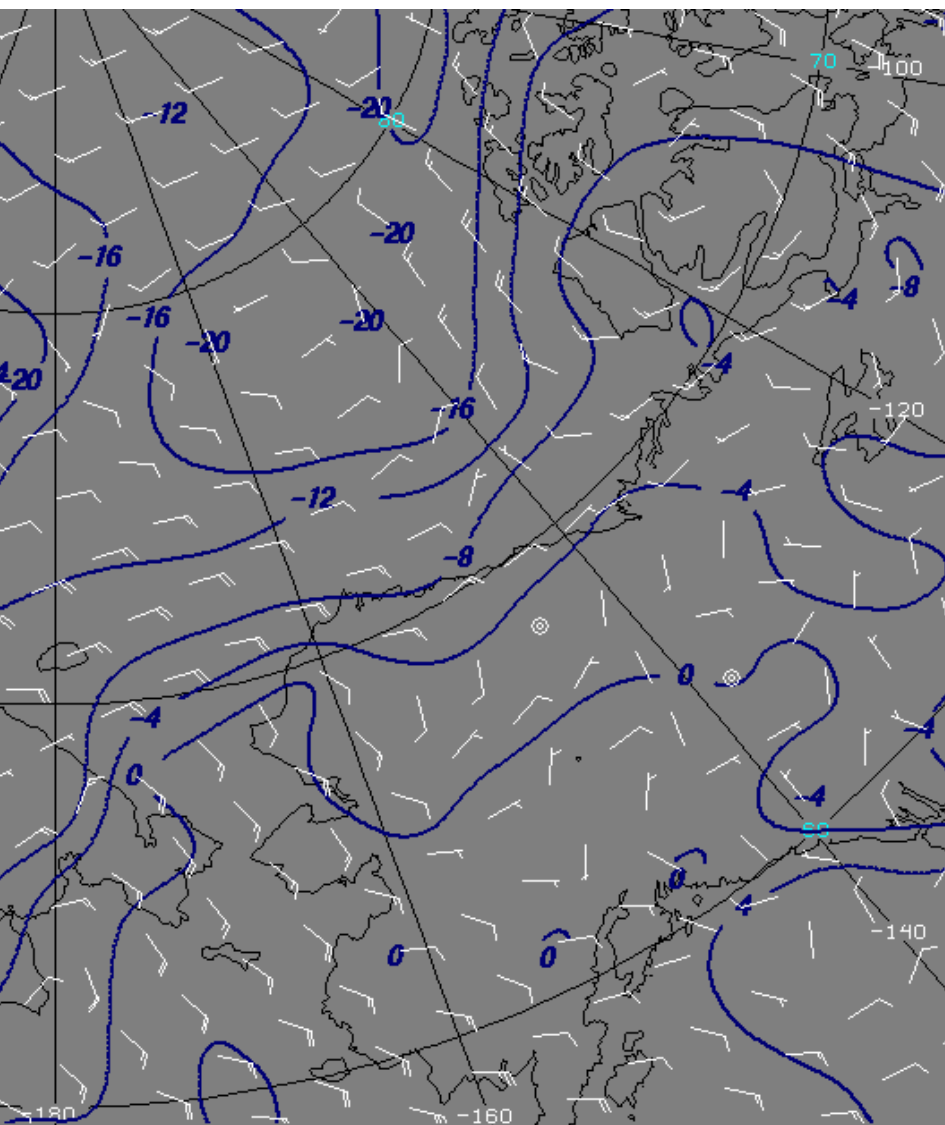




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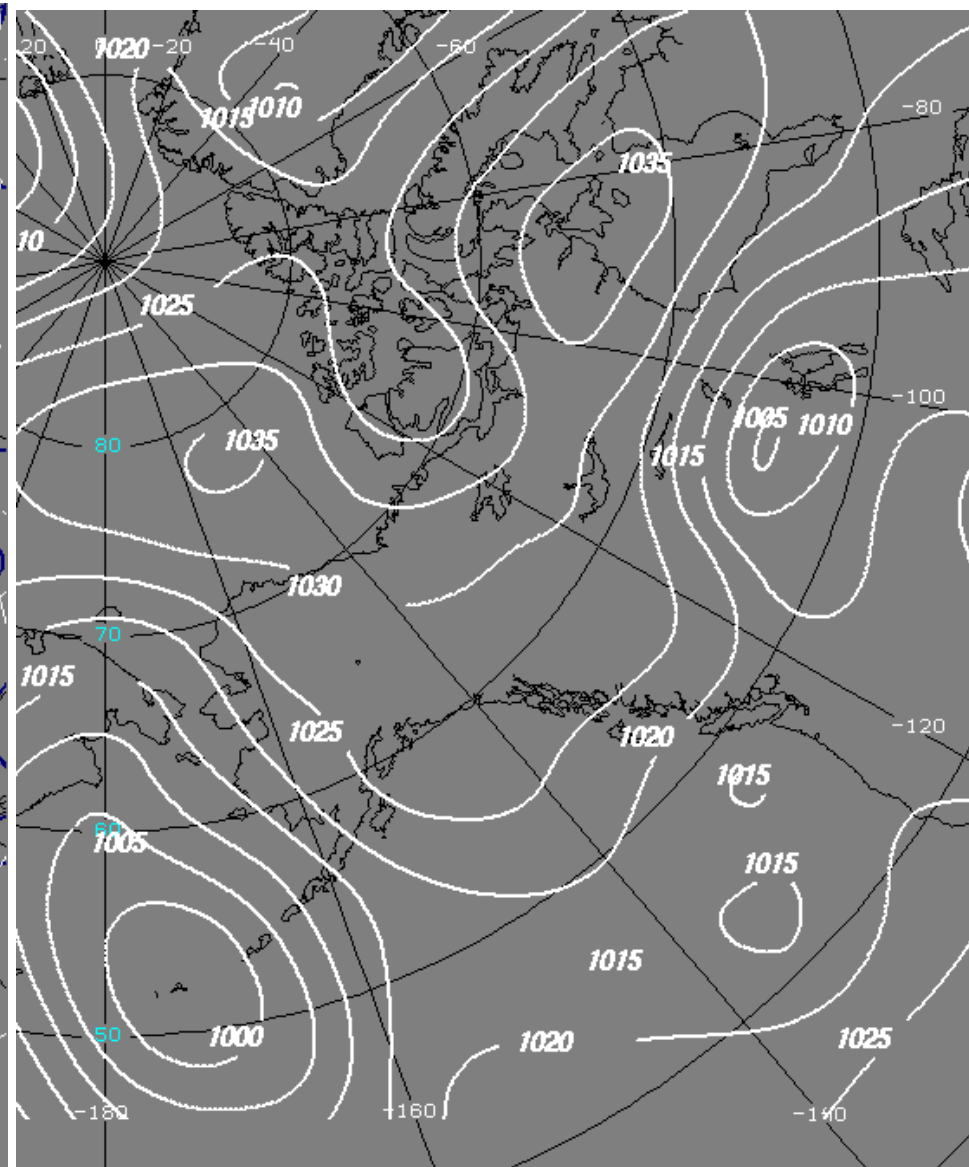


# Mon. 10am



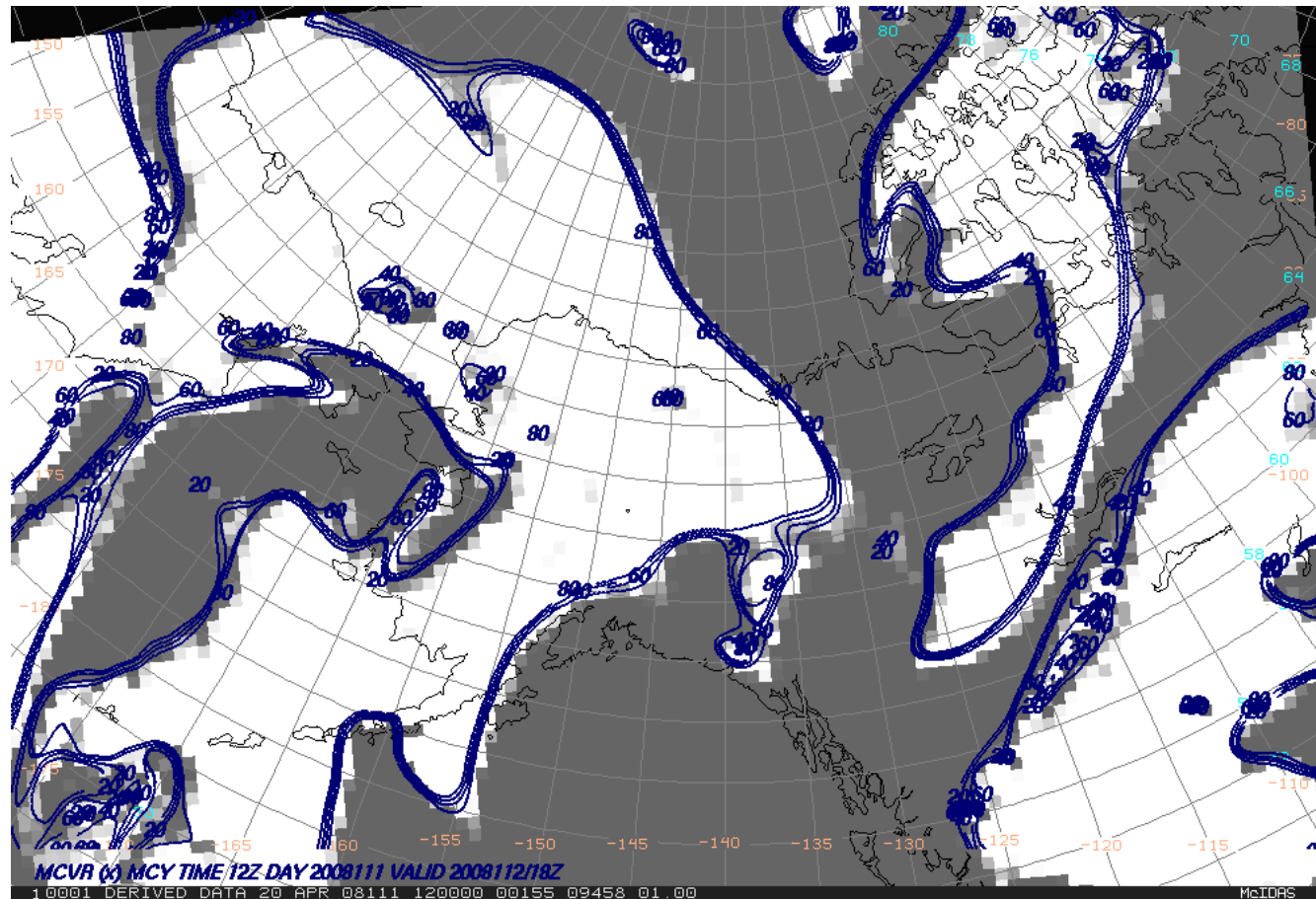
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McIDAS



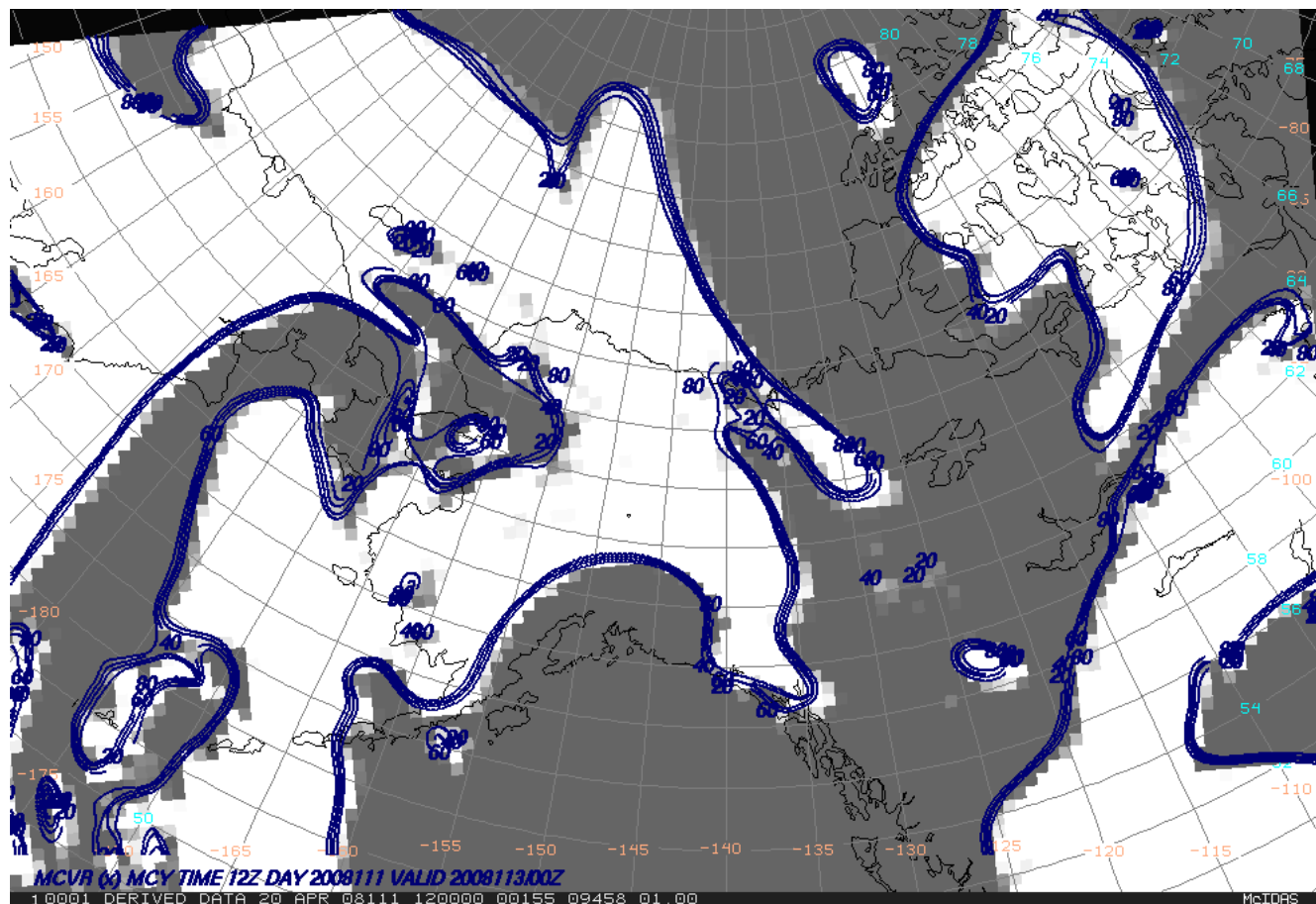
McIDAS

# Cloud cover, Mon. 10am





# Cloud cover, Mon. 4pm



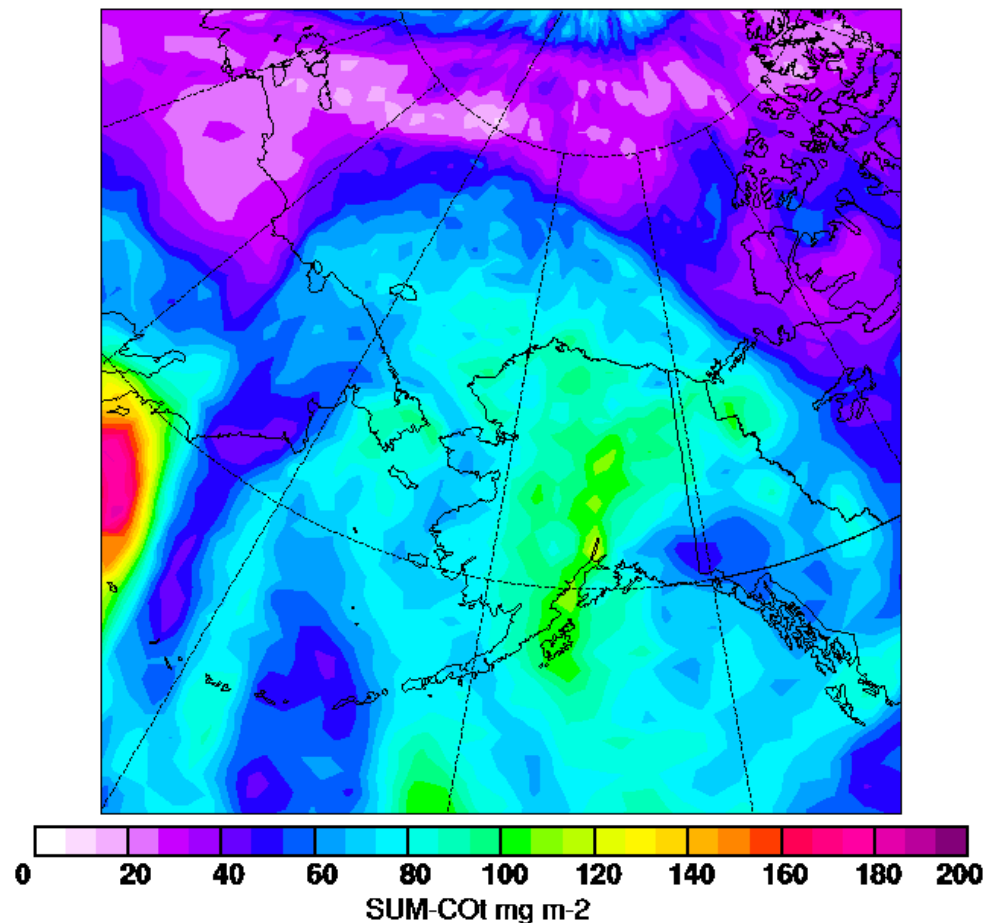
# Anthropo CO: Mon. 10am to midnight

**Total column of species SUM-CO for age class 0 - 20.00 DAYS**

Latest analysis time 20080420.120000 Actual time 20080421.180000

Mean value 0.917E+02 Maximum value 0.662E+03 Minimum value 0.112E+02

Distance of grid lines 20.0 deg



# Anthropo. CO, 4pm

## Tracer profile

Date: 20080420 150000

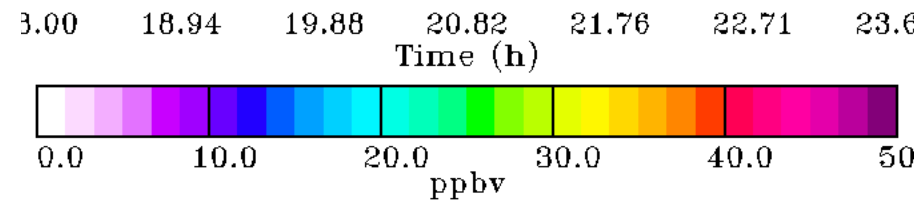
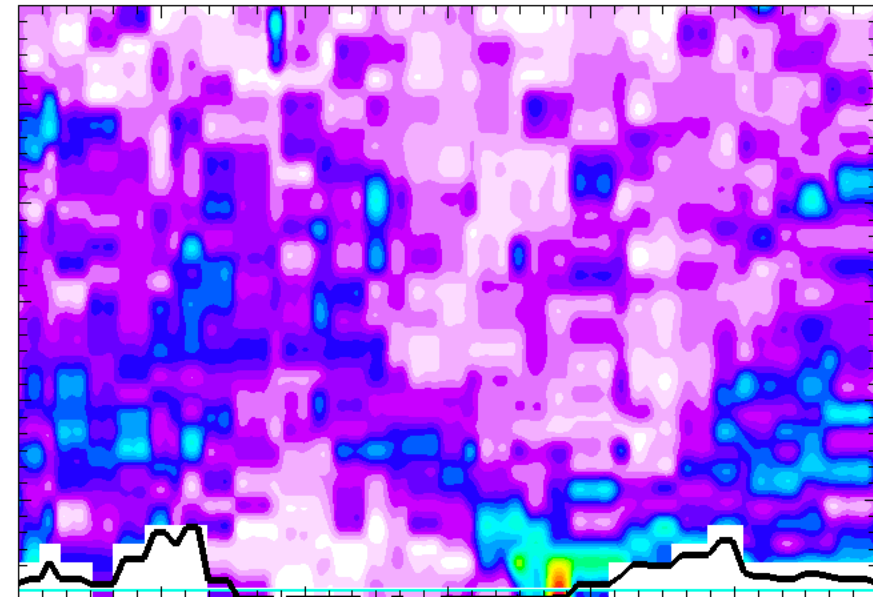
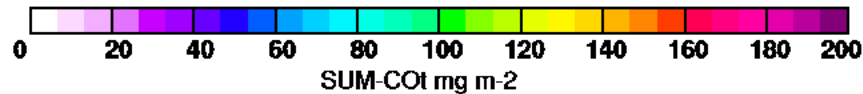
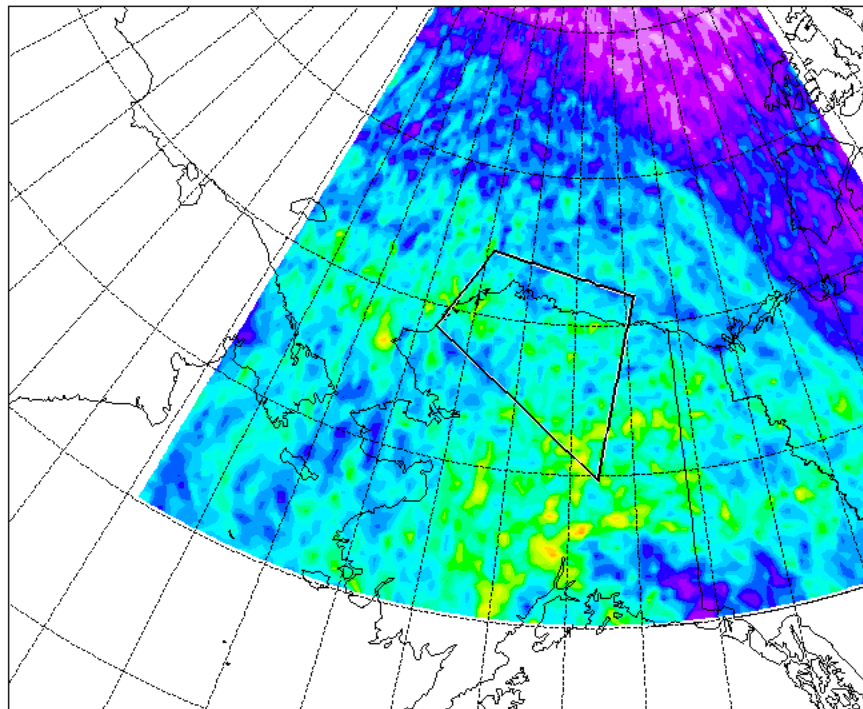
Start: + 0 d 18 h End: + 0 d 23 h

Mean value: 9.468  
Maximum value: 36.720  
Minimum value: 1.073

## Total column of species SUM-CO for age class 0 - 20.00 DAYS

Latest analysis time 20080420.120000 Actual time 20080422. 0

Mean value 0.599E+02 Maximum value 0.150E+03 Minimum value 0.285E+01  
Distance of grid lines 5.0 deg



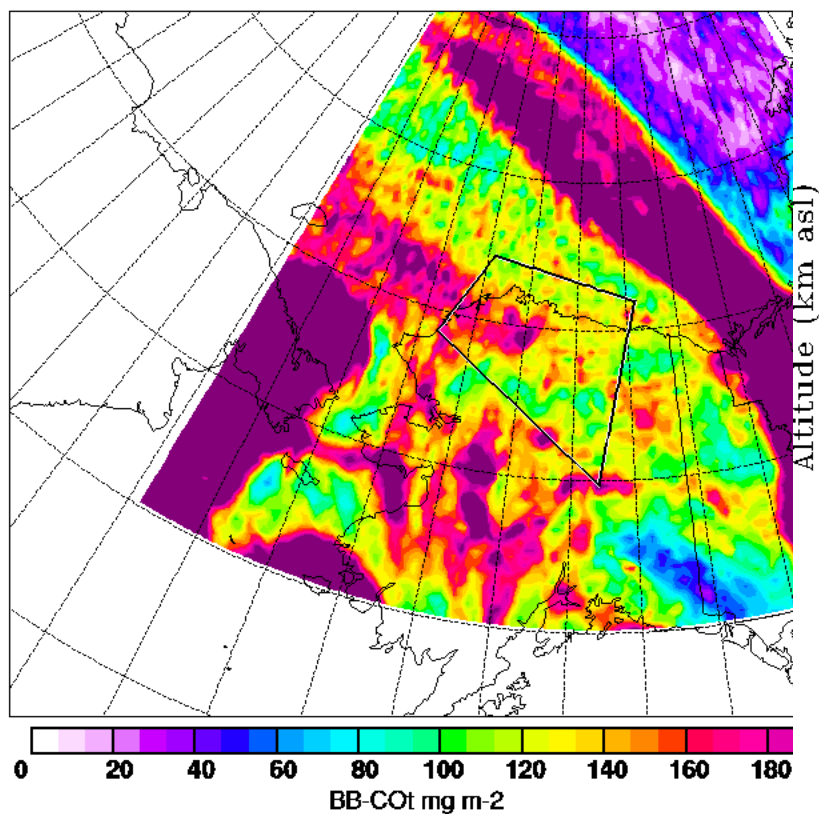
# BB CO, 4pm

**Total column of species BB-COt for age class 0 - 20.00 DAY:**

Latest analysis time 20080420. 60000 Actual time 20080422. 0

Mean value 0.130E+03 Maximum value 0.498E+03 Minimum value 0

Distance of grid lines 5.0 deg



Tracer profile

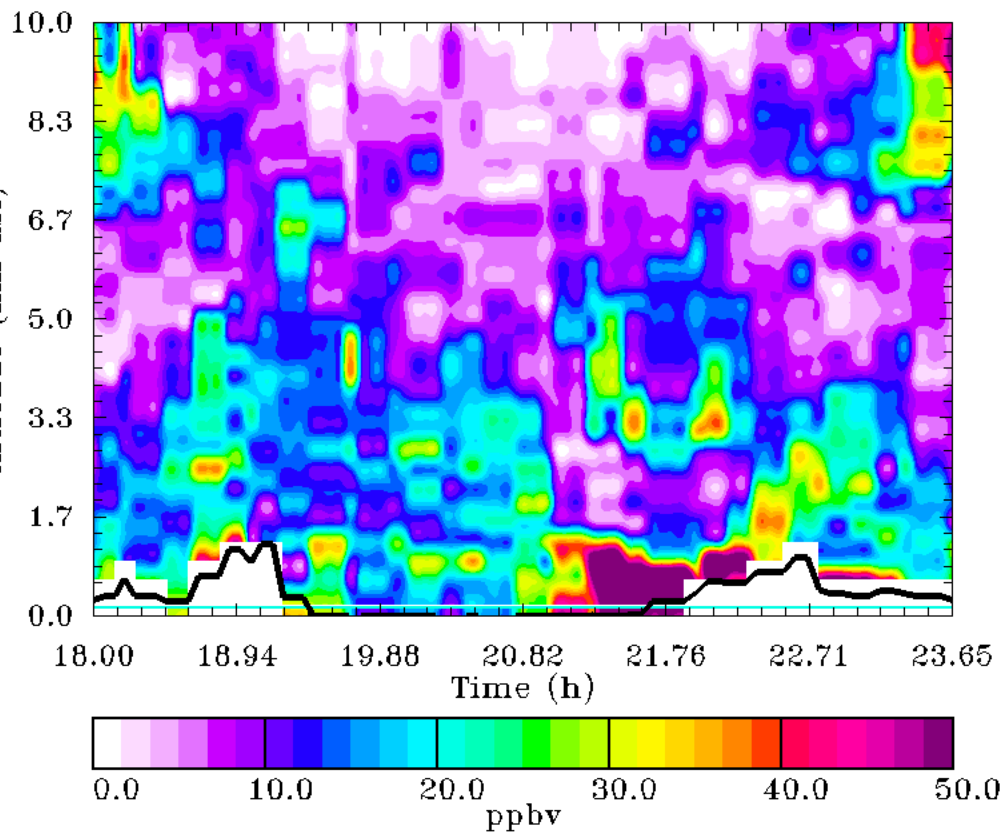
Date: 20080420 90000

Start: + 0 d 18 h End: + 0 d 23 h

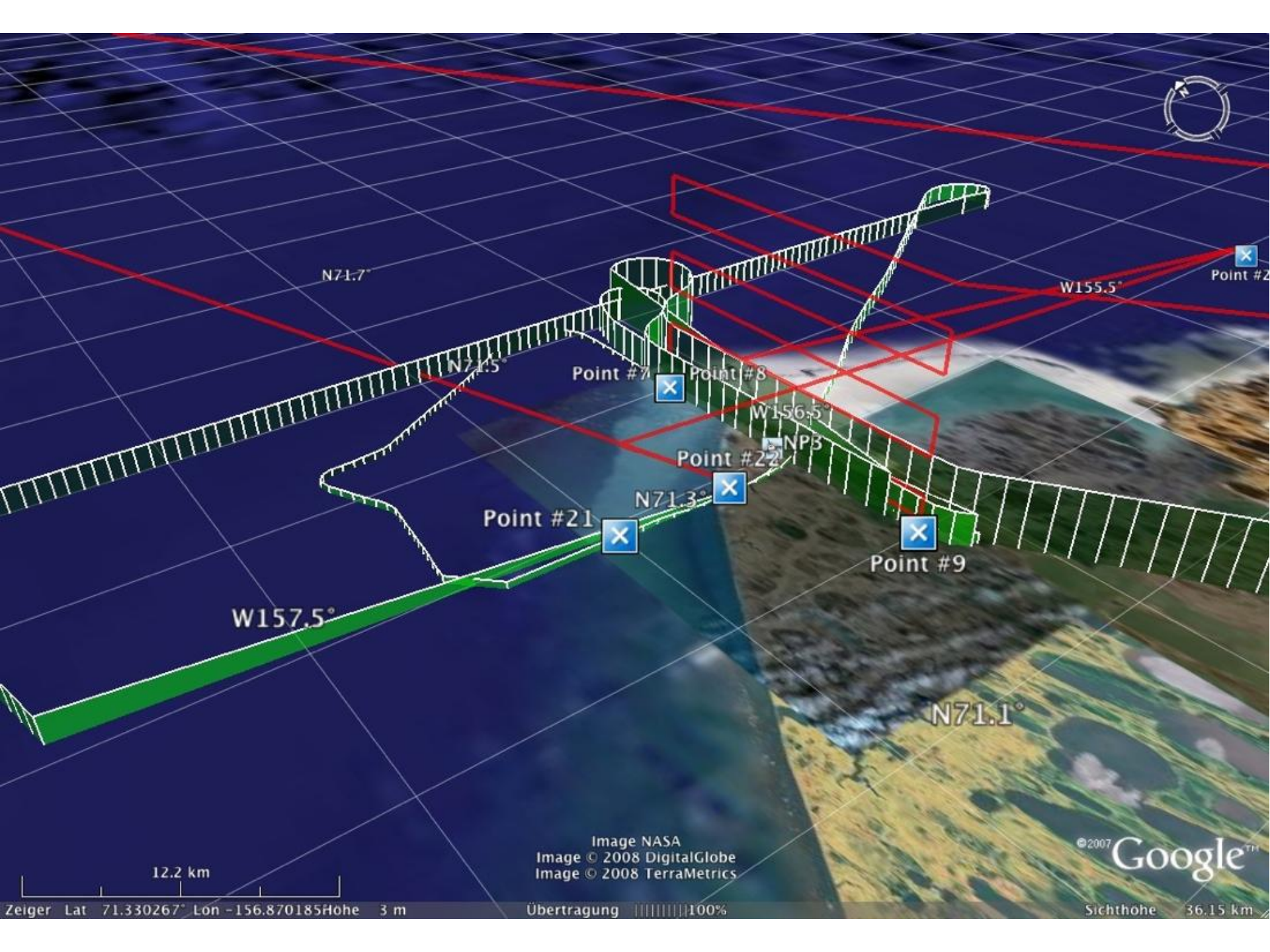
Mean value: 14.820

Maximum value: 77.068

Minimum value: 0.833







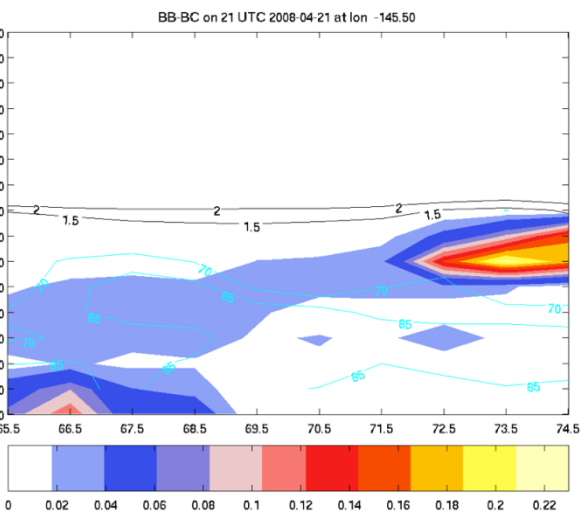
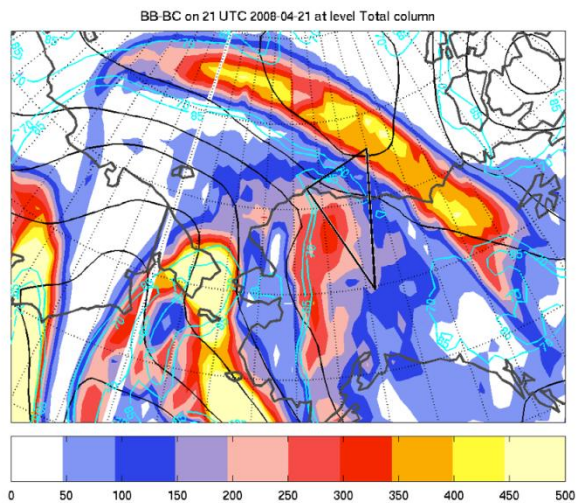
Modis/Terra  
visible

Barrow

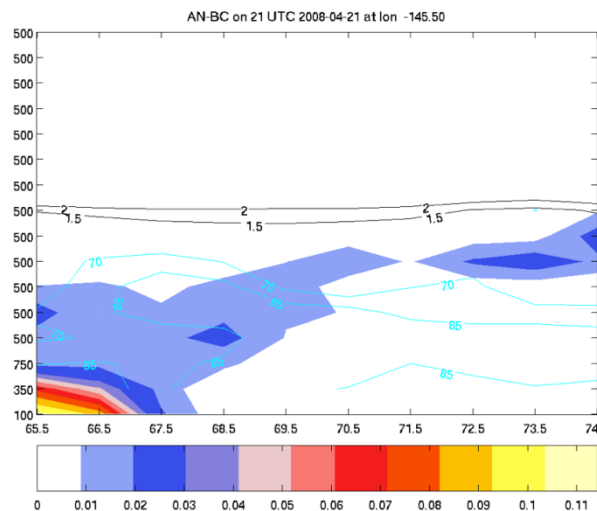
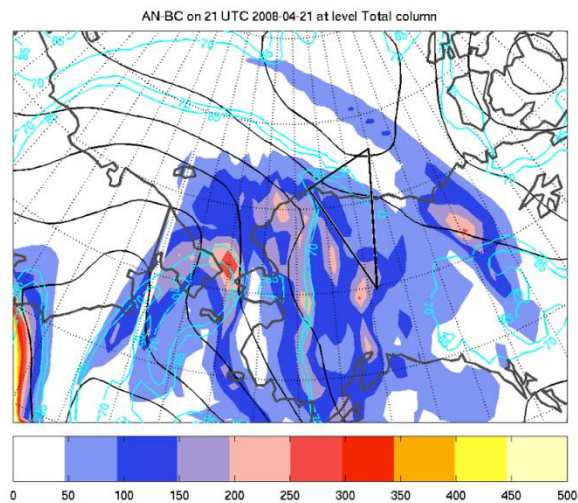




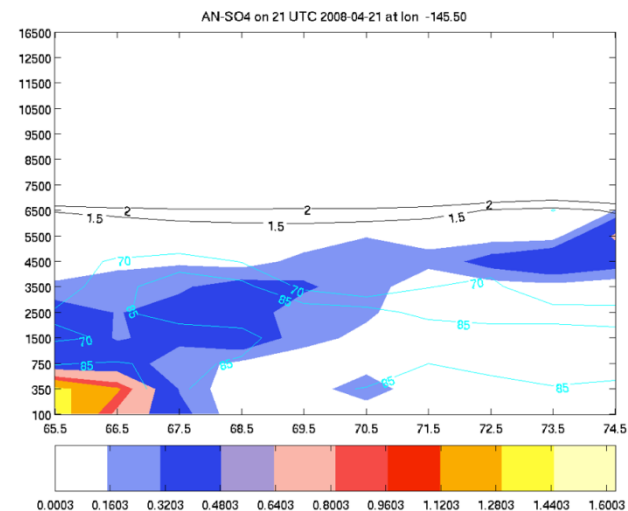
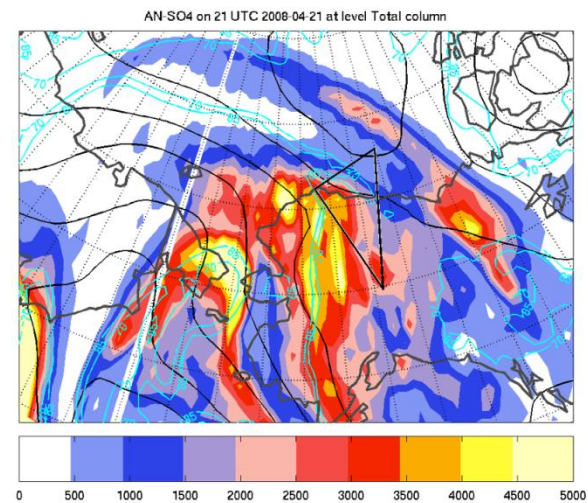
# BB-BC



# anthro BC



# anthro SO4



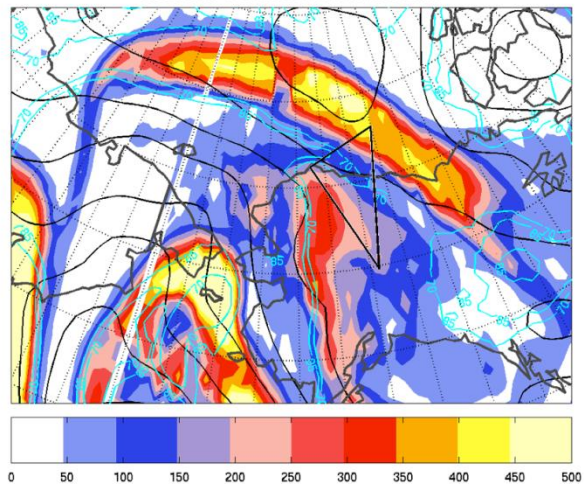


Tomorrow, 18Z

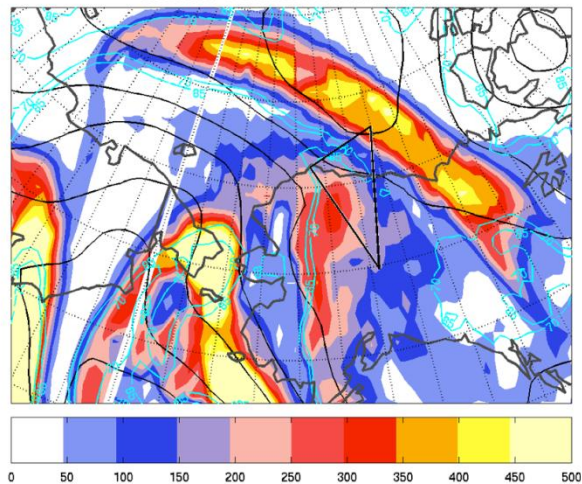
Tomorrow, 21Z

Tomorrow, 00Z

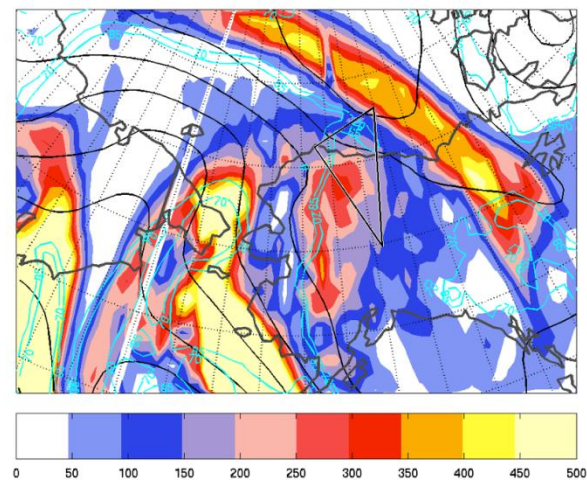
BB-BC on 18 UTC 2008-04-21 at level Total column



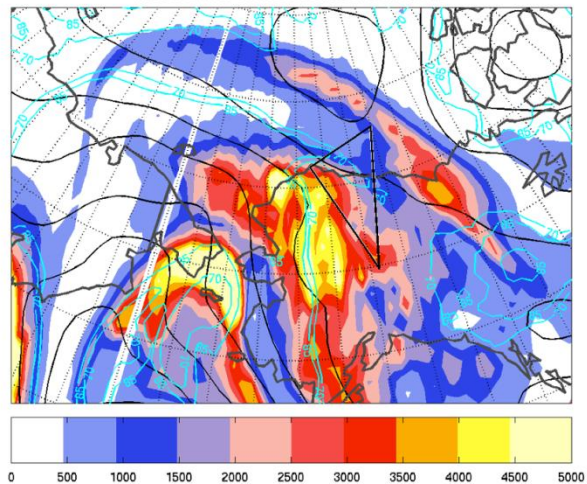
BB-BC on 21 UTC 2008-04-21 at level Total column



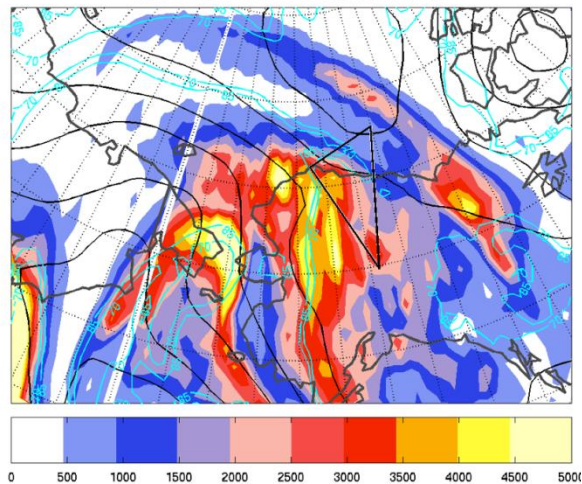
BB-BC on 00 UTC 2008-04-22 at level Total column



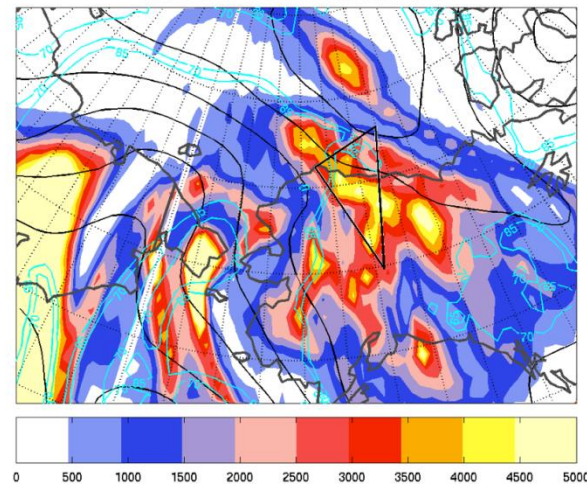
AN-SO4 on 18 UTC 2008-04-21 at level Total column



AN-SO4 on 21 UTC 2008-04-21 at level Total column



AN-SO4 on 00 UTC 2008-04-22 at level Total column

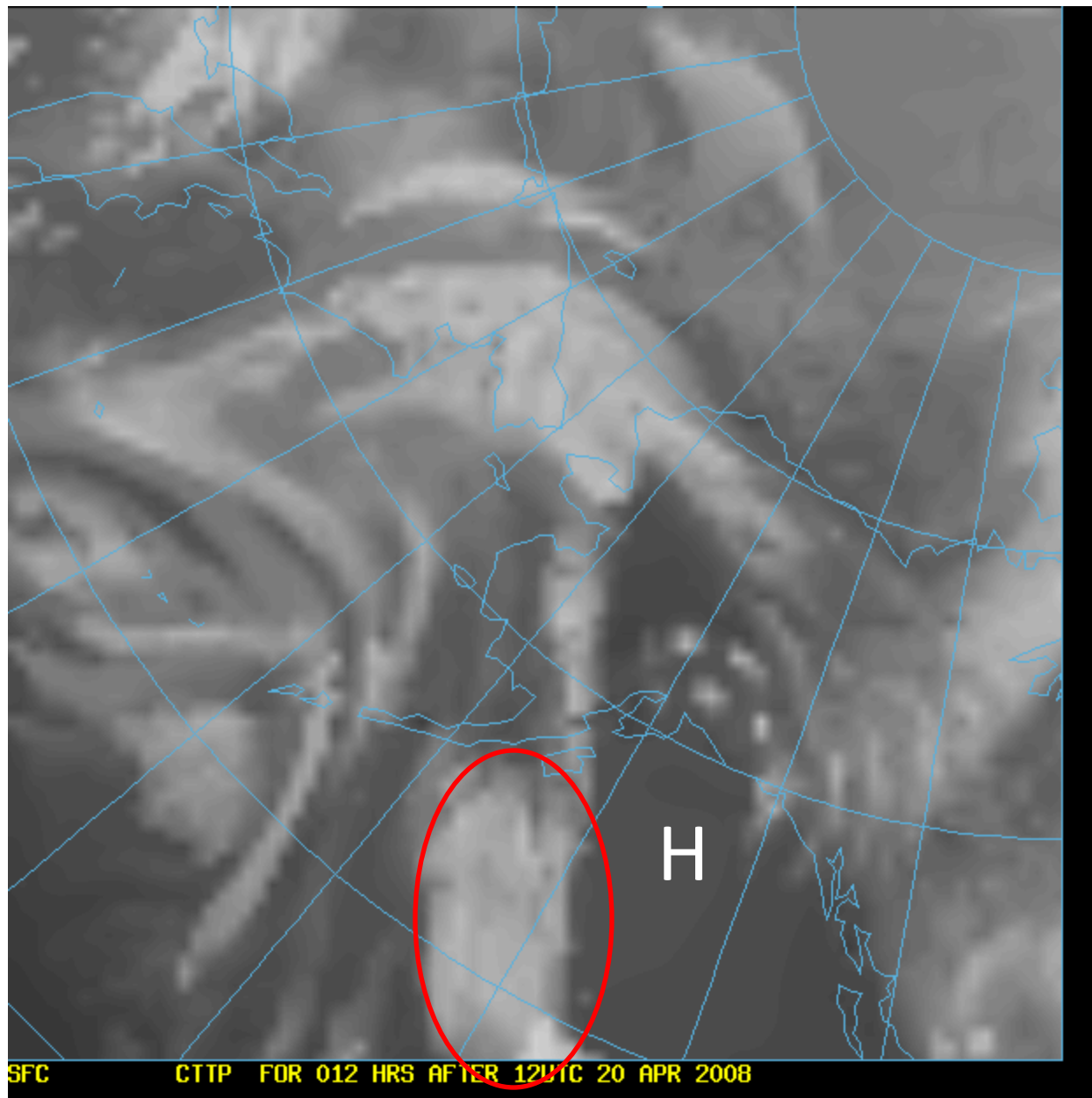




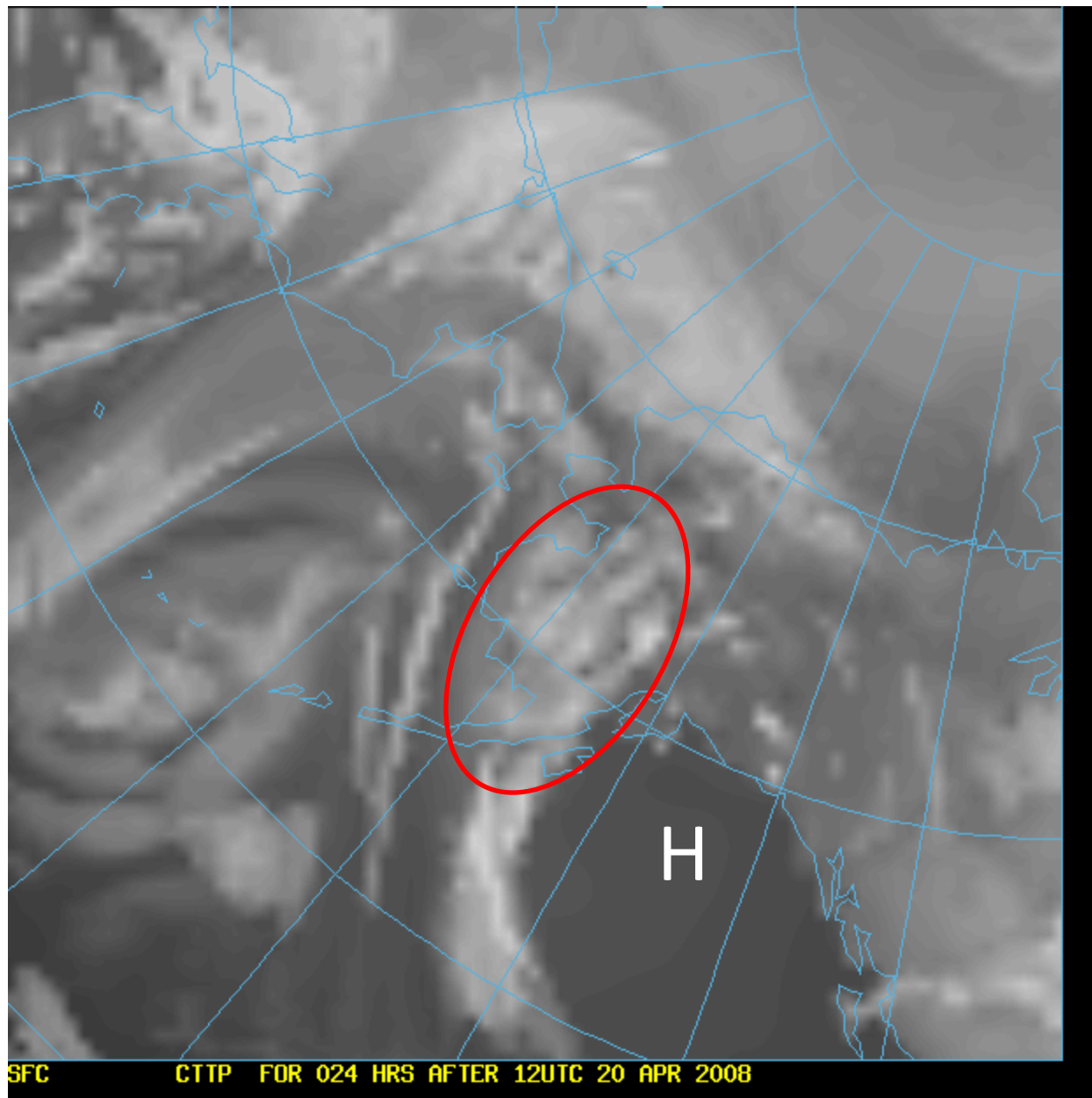
# **RAQMS Fairbanks Local FX Discussion:**

**00Z 04/21- 00Z 04/23  
Initialized 12Z 04/19**

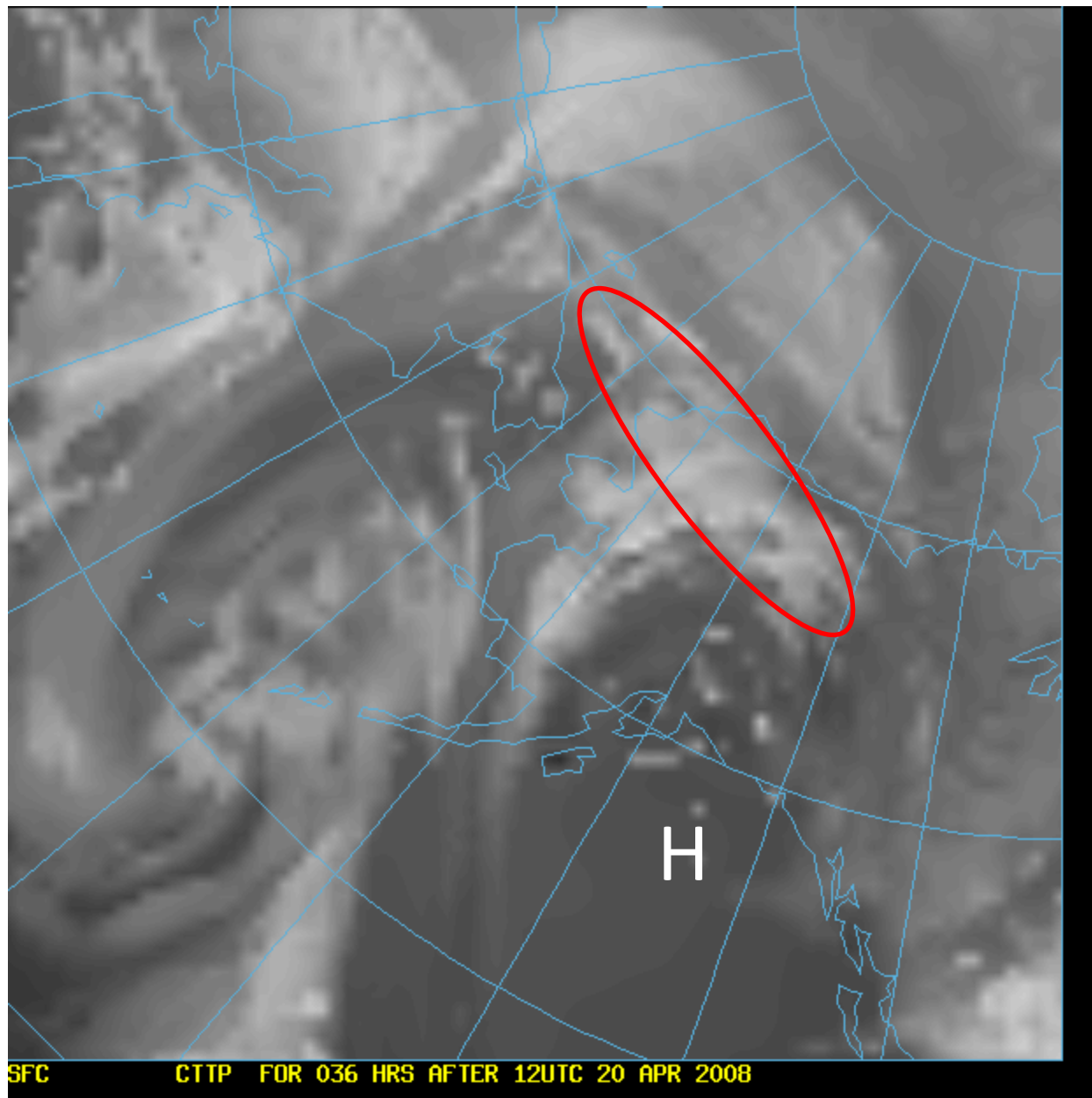
**12hr CRAS 11 micron (Vis) FX Valid 00Z 04/21/08 (Sunday 4:00pm)**



**12hr CRAS 11 micron (Vis) FX Valid 12Z 04/21/08 (Monday 4:00am)**

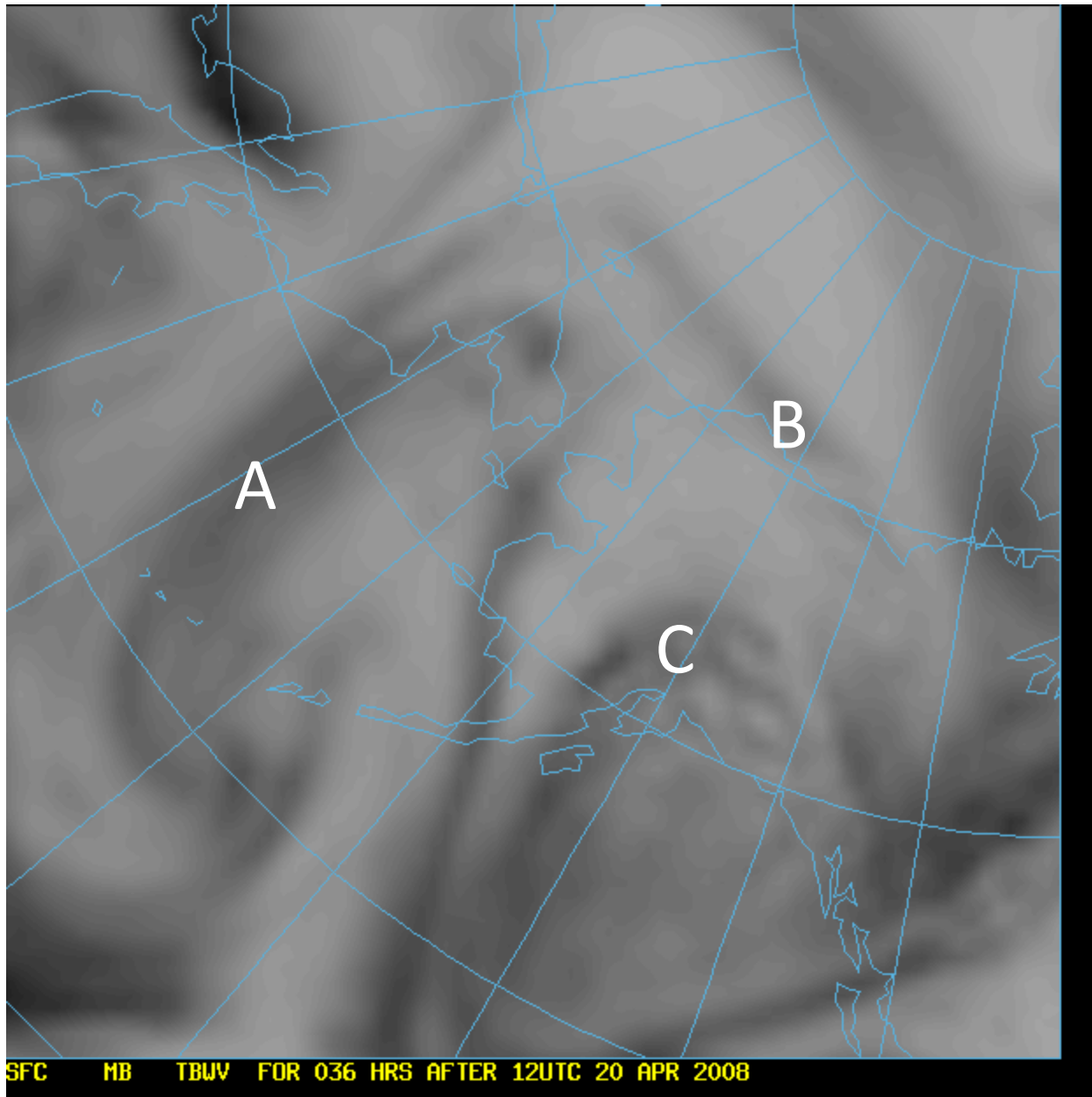


**12hr CRAS 11 micron (Vis) FX Valid 00Z 04/22/08 (Monday 4:00pm)**

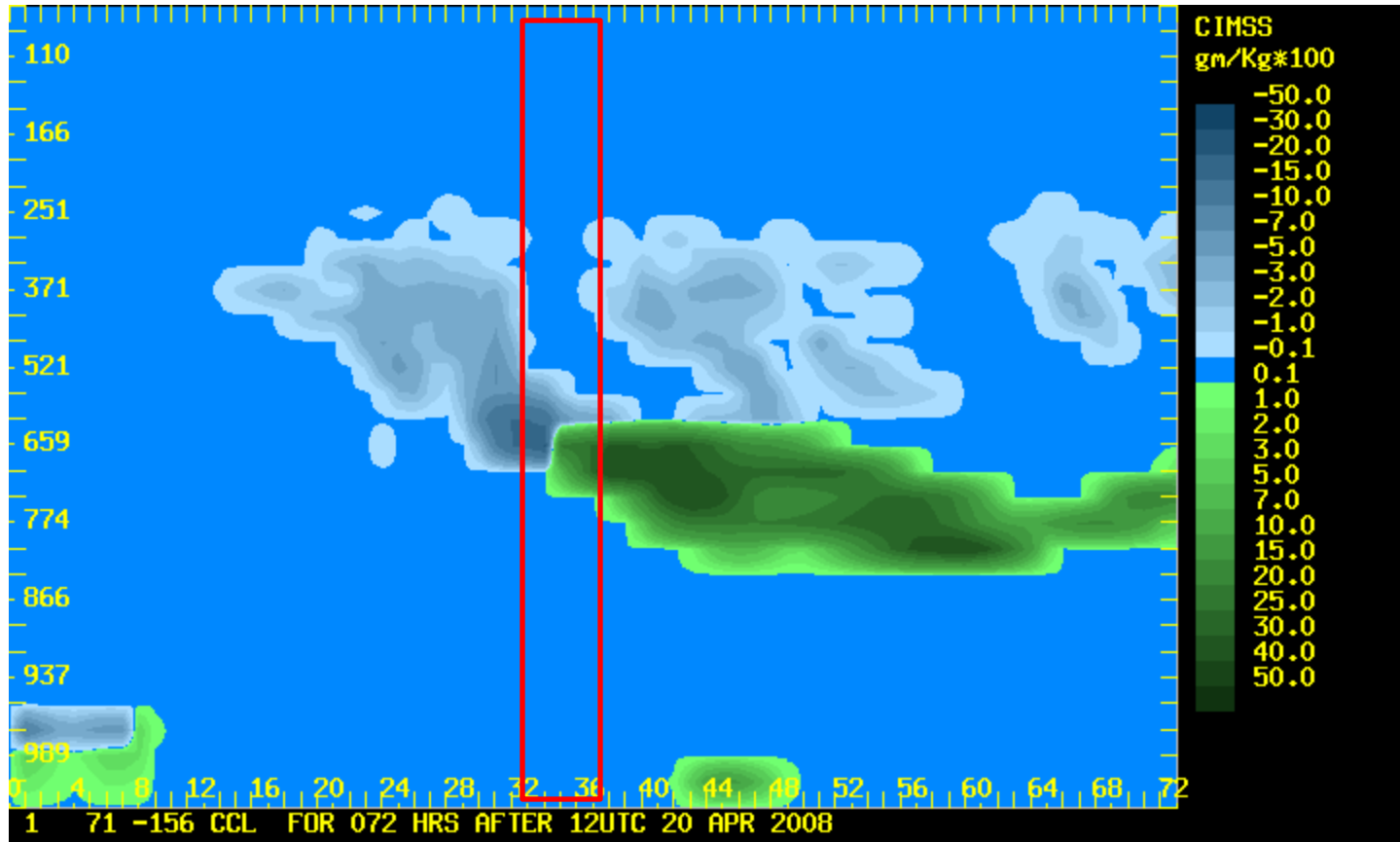




**12hr CRAS 6.7 micron (IR) FX Valid 00Z 04/22/08 (Monday 4:00pm)**

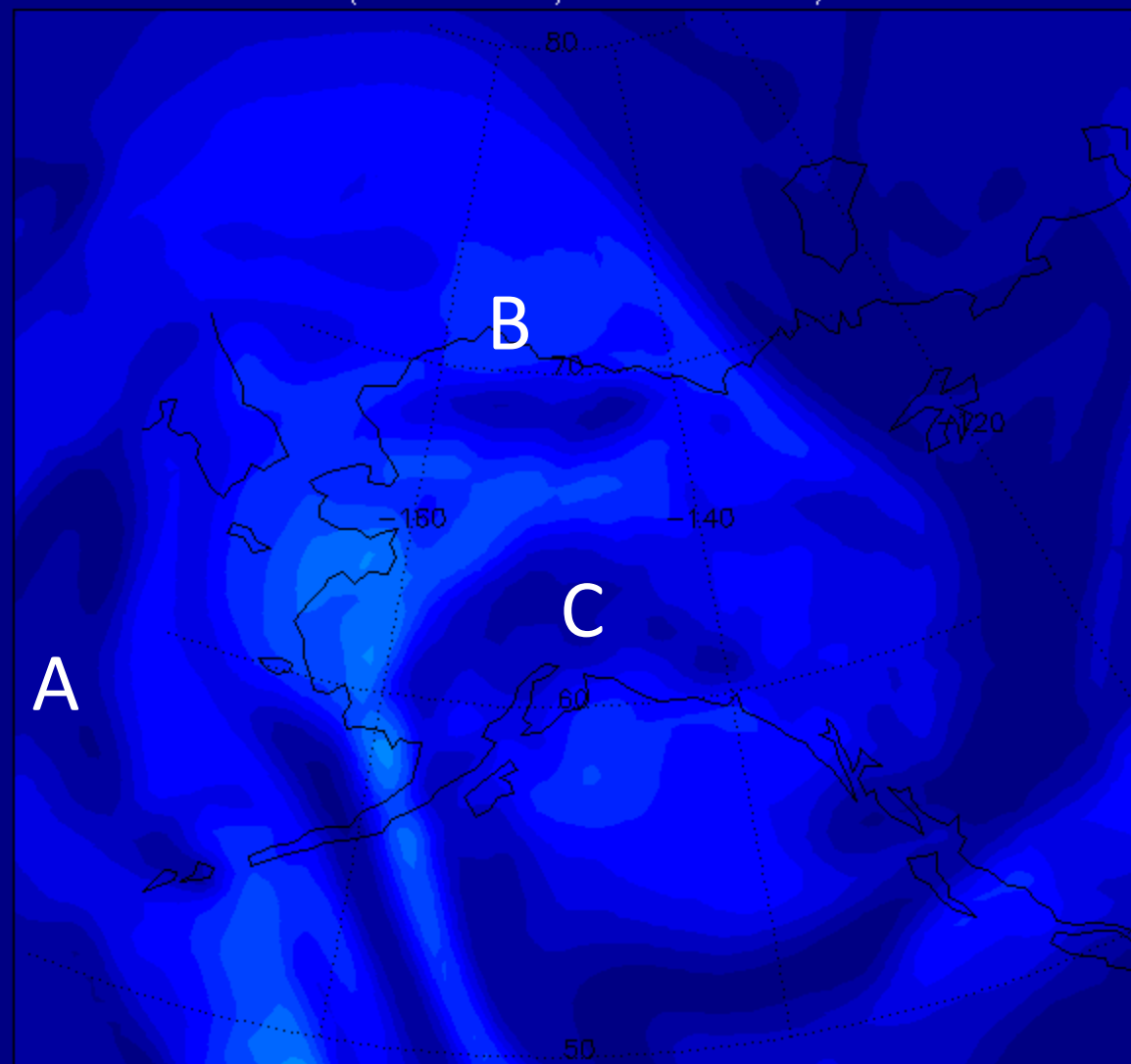


## CRAS Barrow Cloud FX initialized 12Z 04/20/08

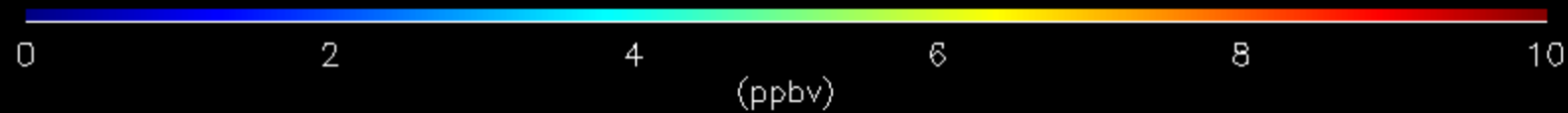
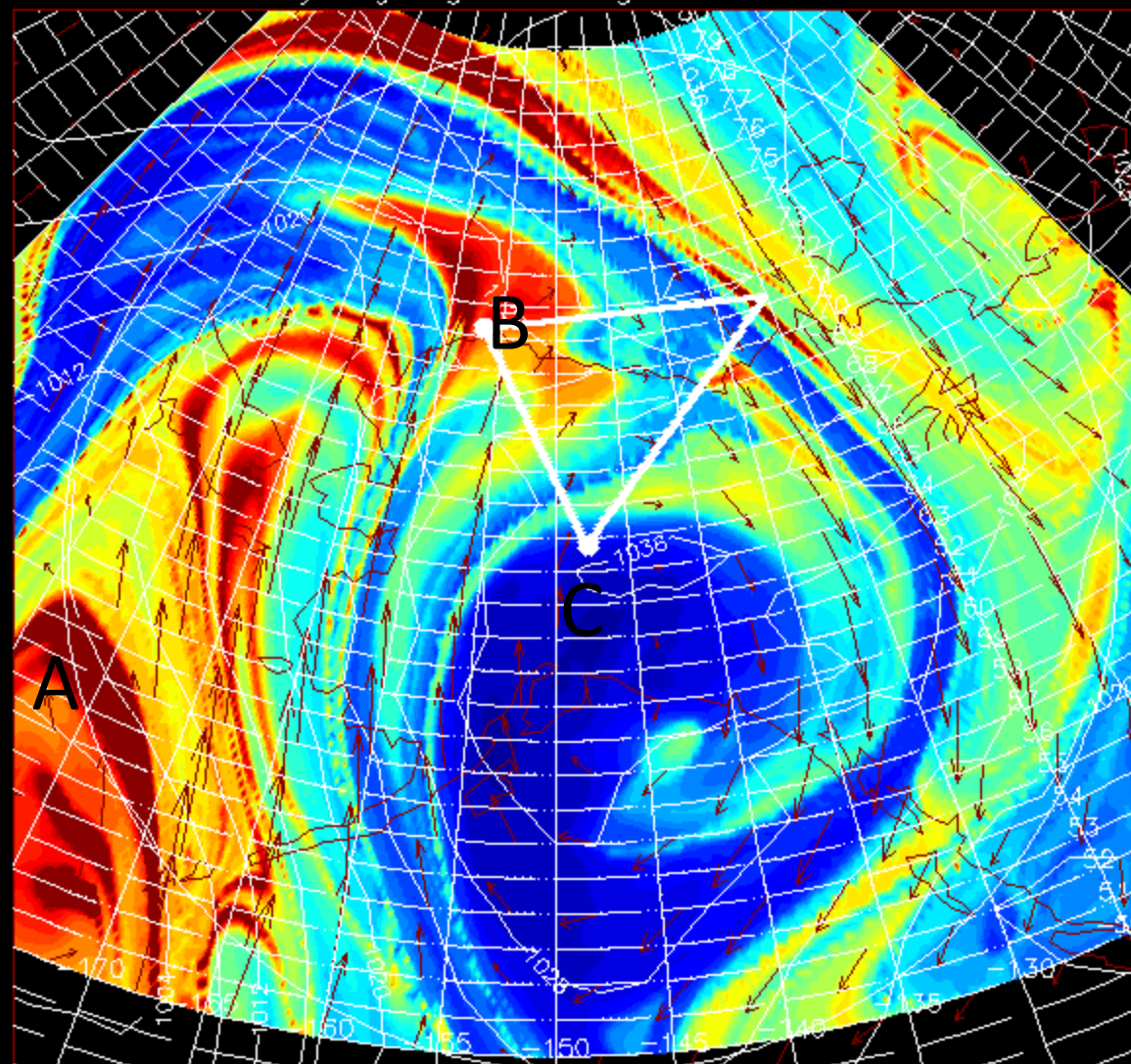


GFS 5km Q 00Z 20080422

(Pressure Contoured/SFC Intersection Dashed)

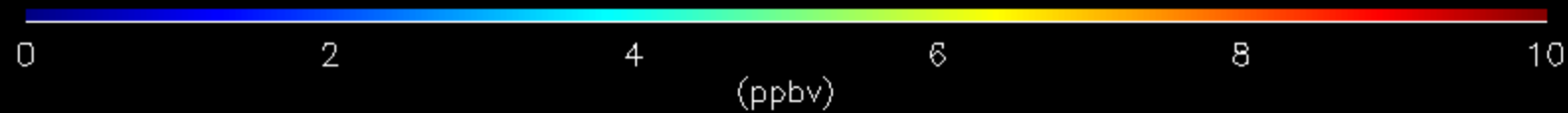
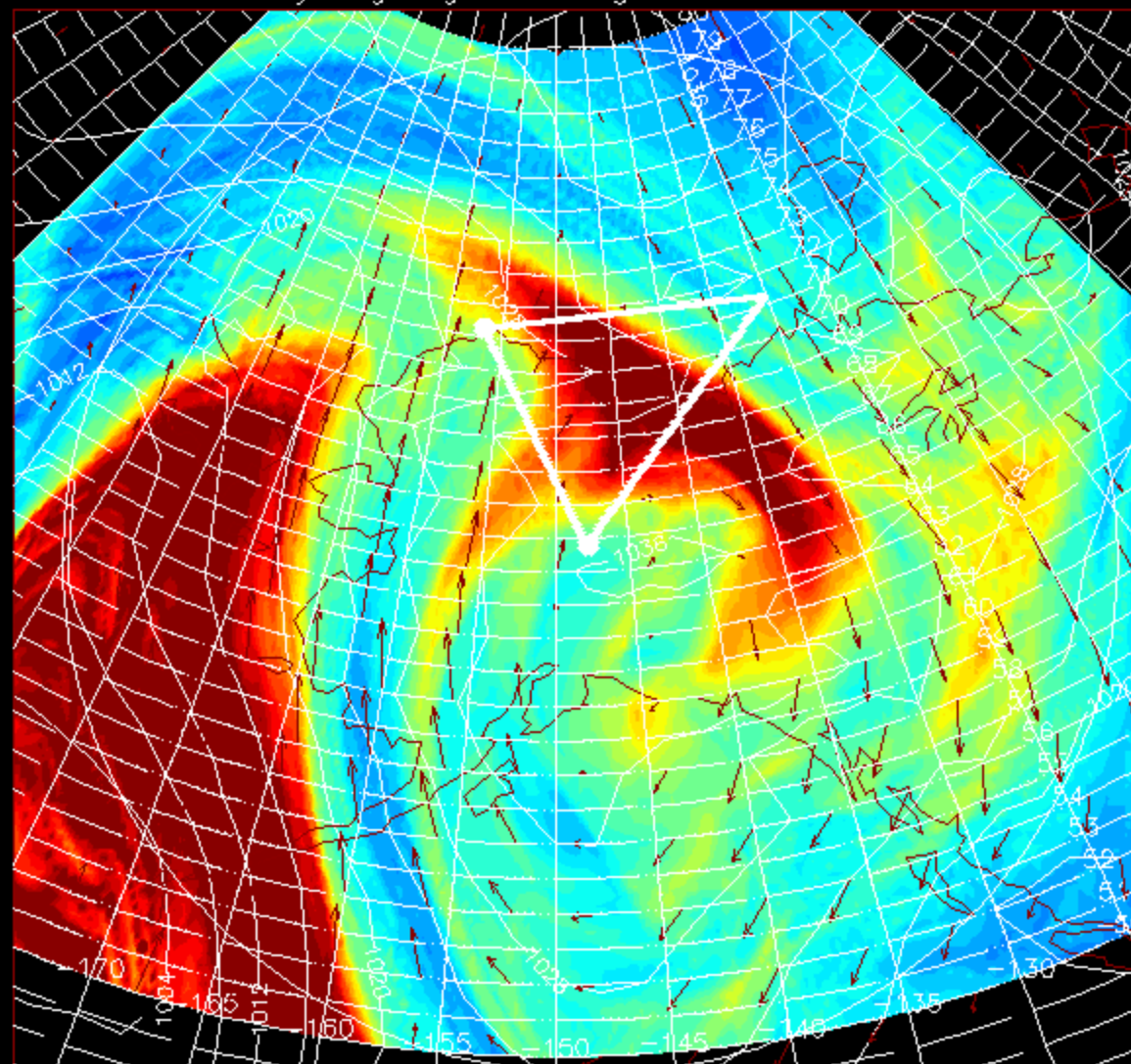


5km 5-day Lagrangian Averaged BC+OC 2008042200

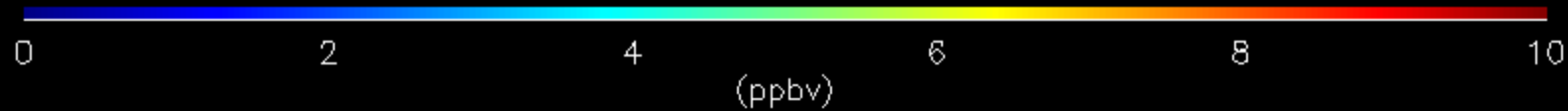
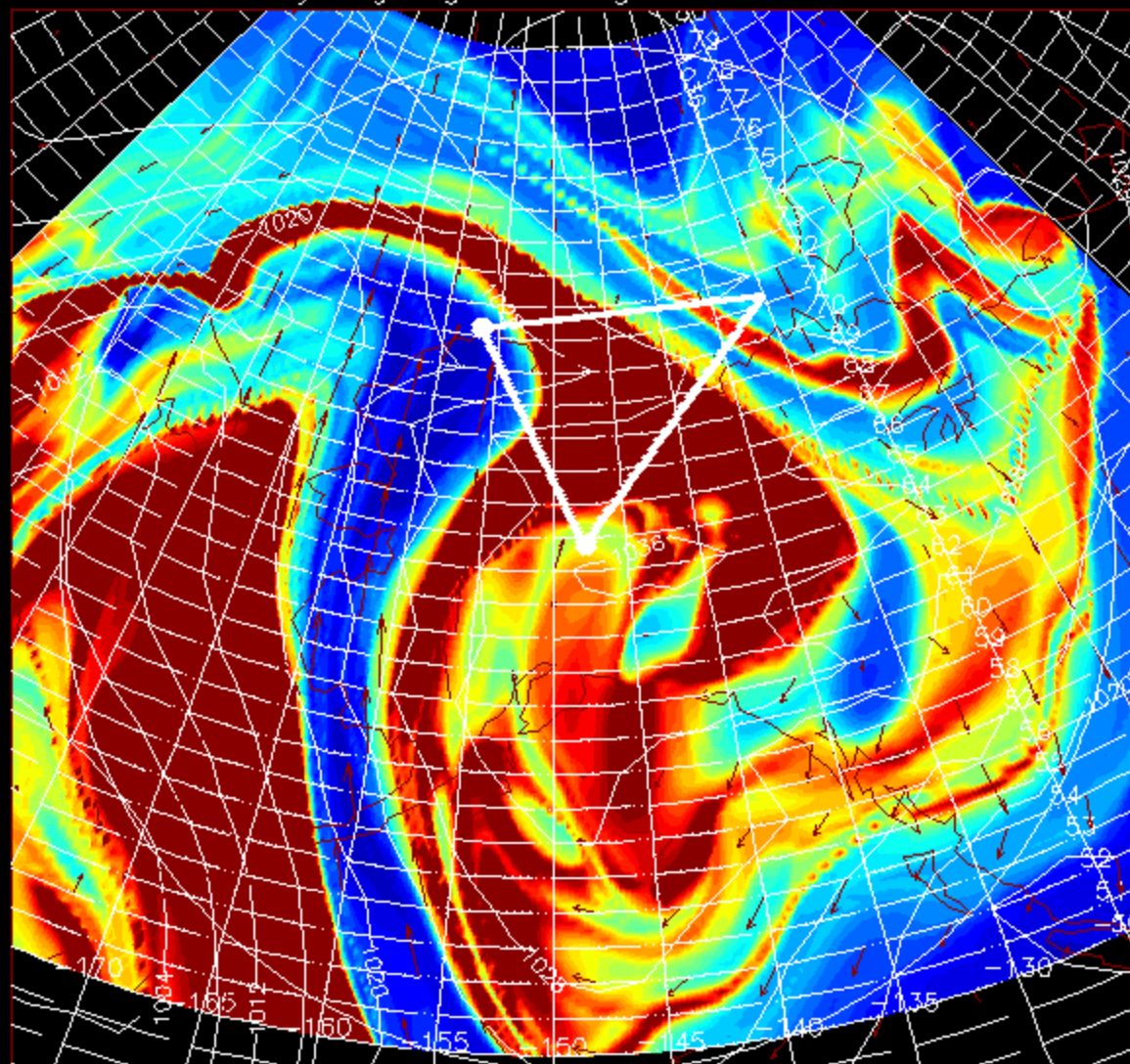




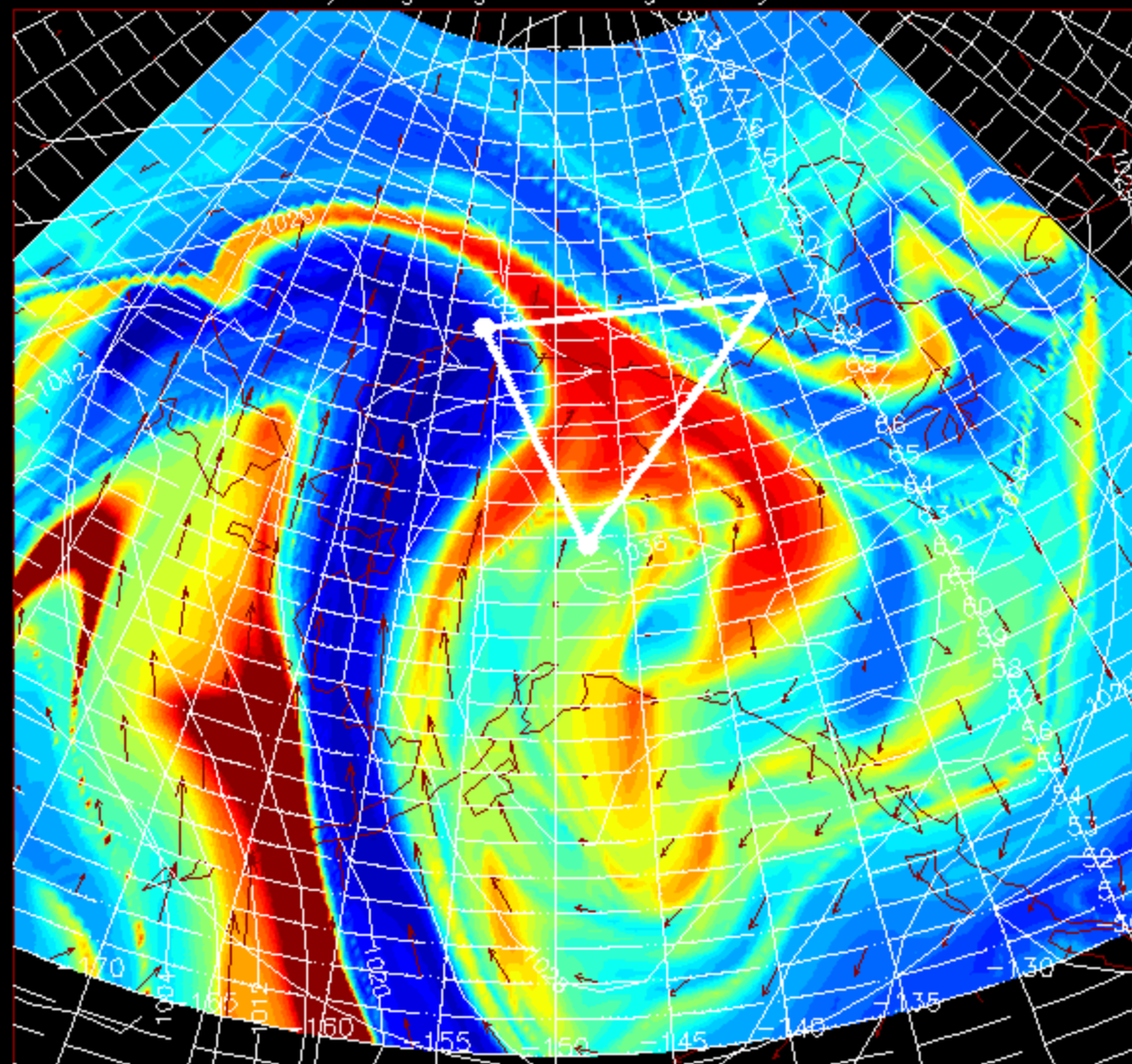
COL 5-day Lagrangian Averaged BC+OC 2008042200



1km 5-day Lagrangian Averaged BC+OC 2008042200



1km 5-day Lagrangian Averaged NO<sub>y</sub> 2008042200



0.0

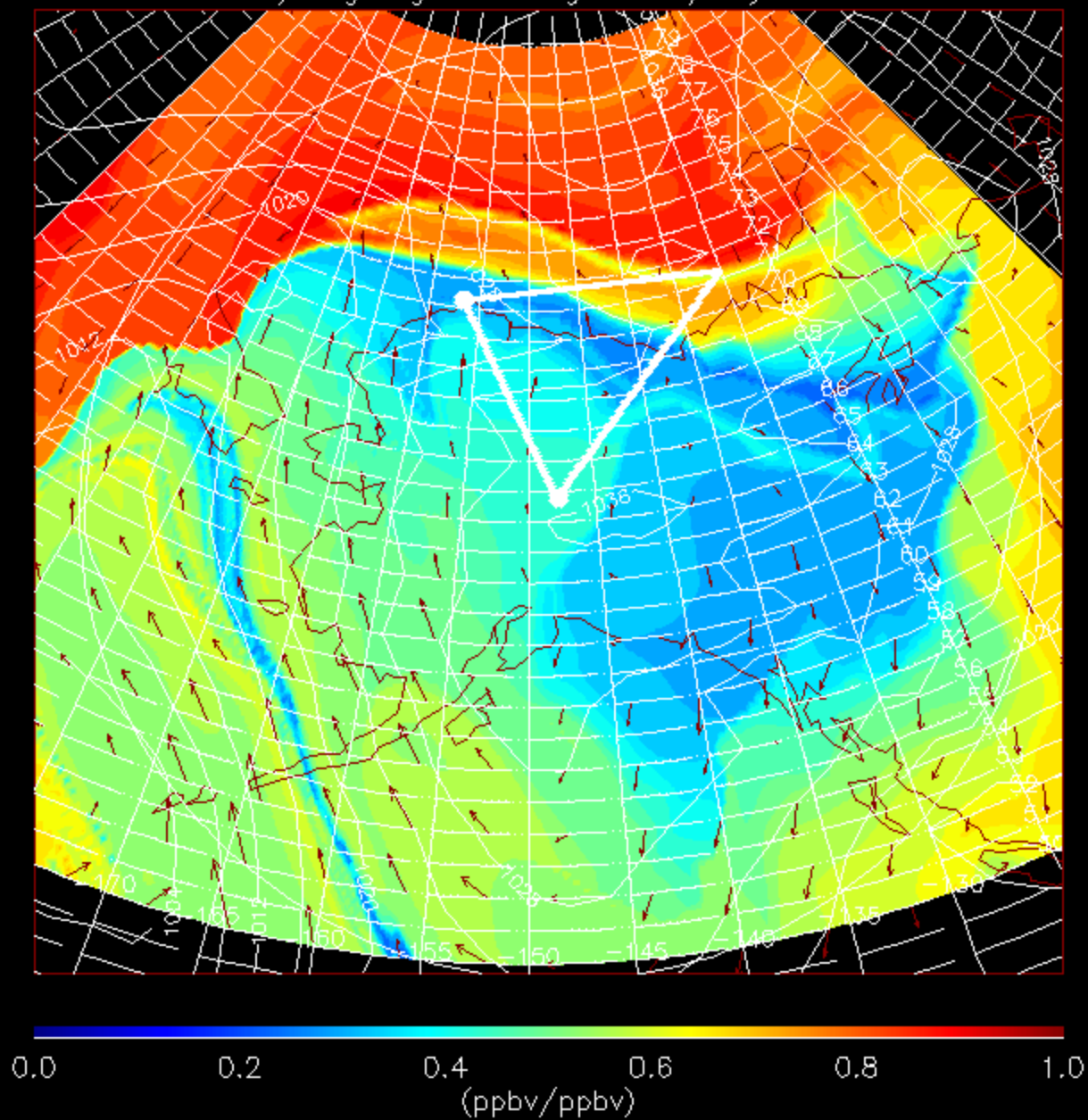
0.5

1.0  
(ppbv)

1.5

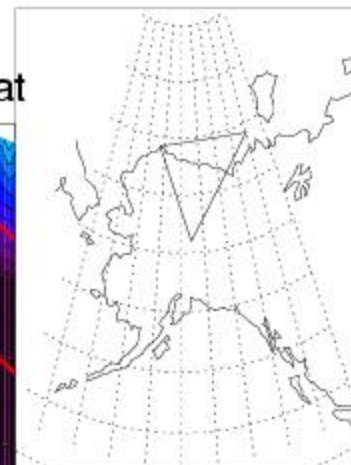
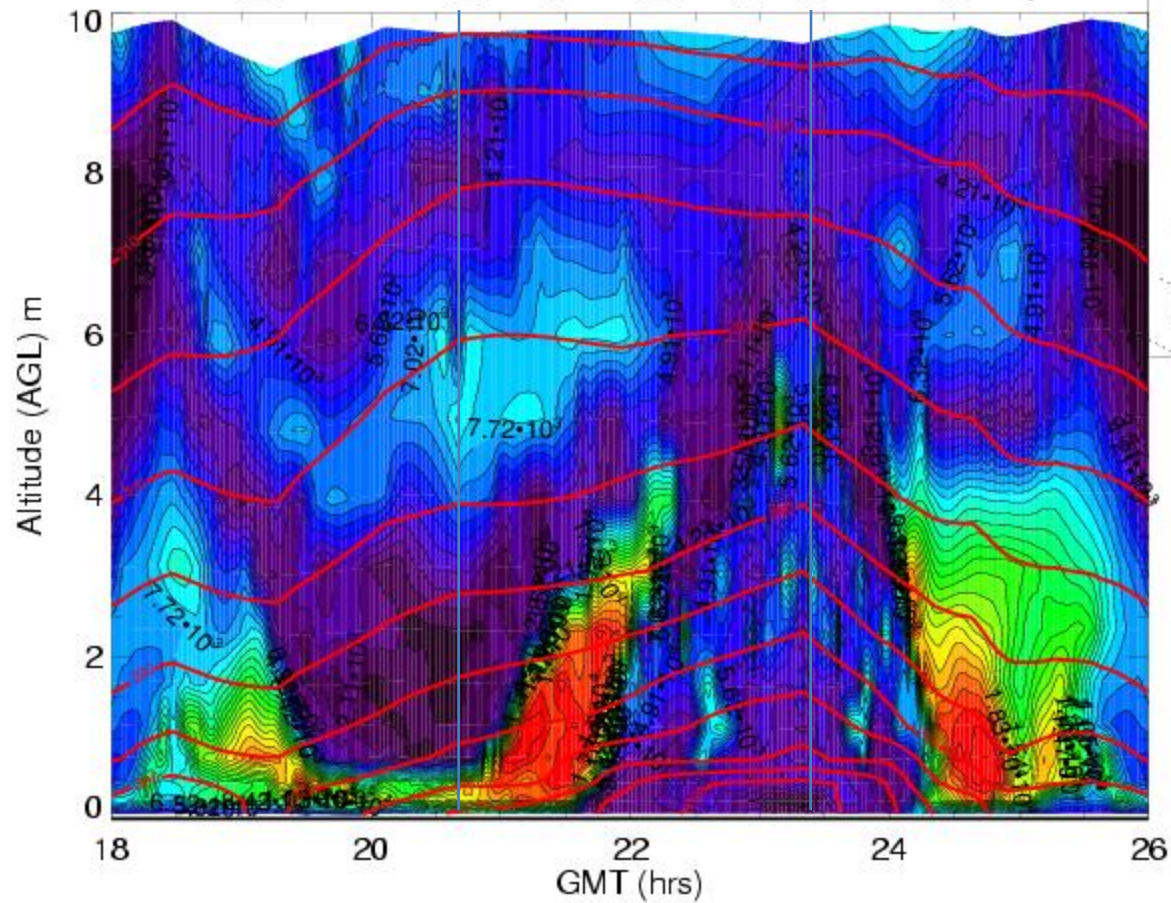
2.0

SFC 5-day Lagrangian Averaged PAN/NO<sub>y</sub> 2008042200

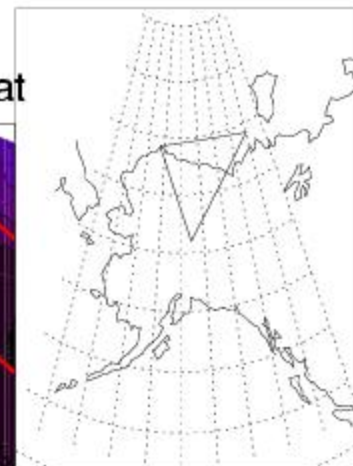
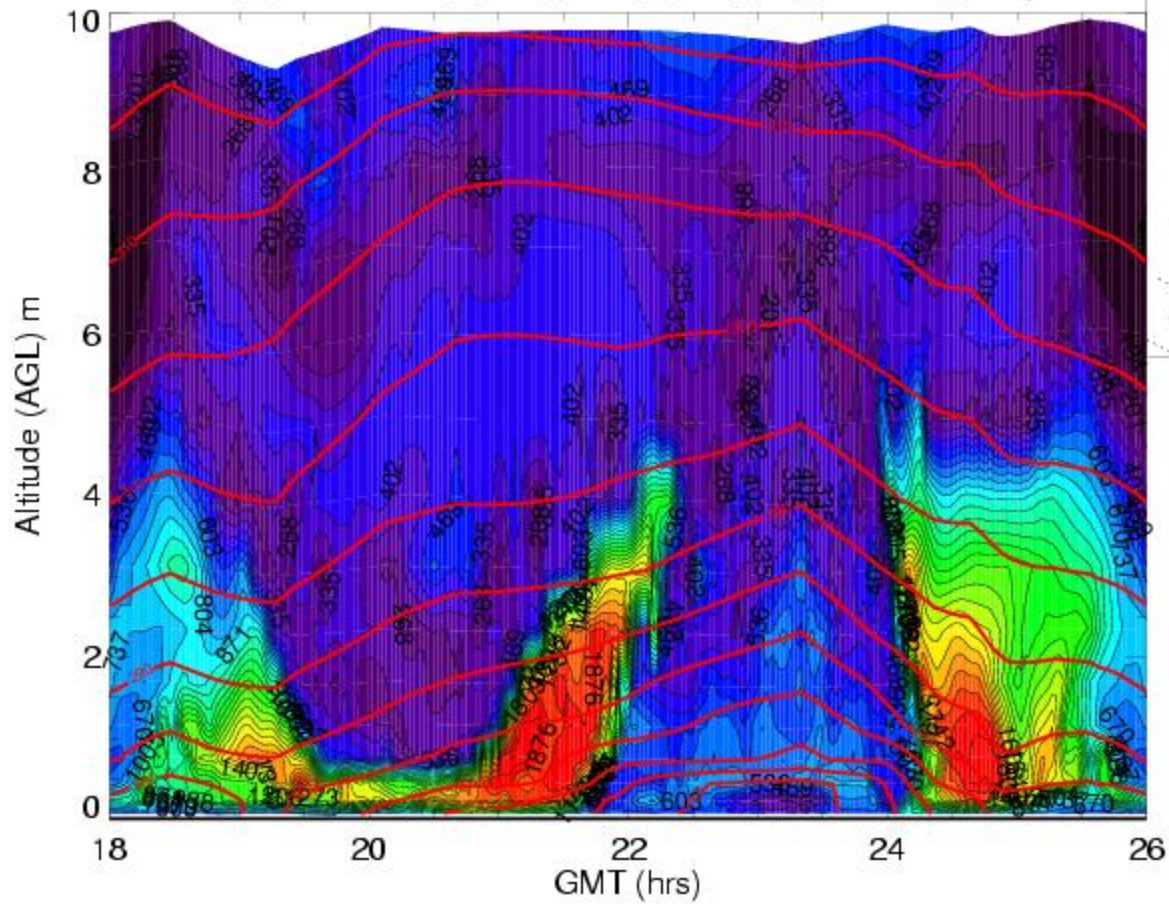




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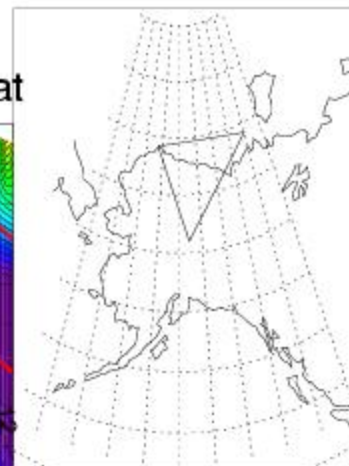
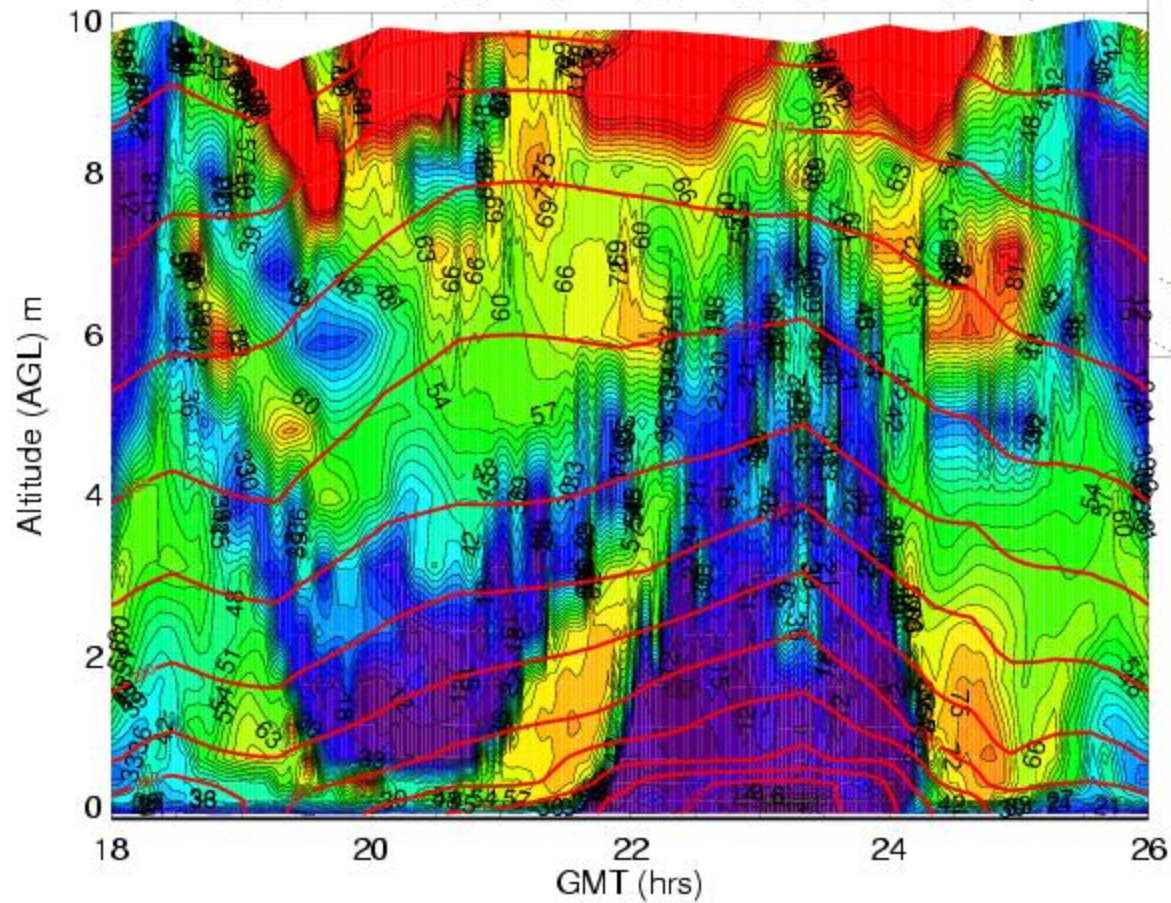


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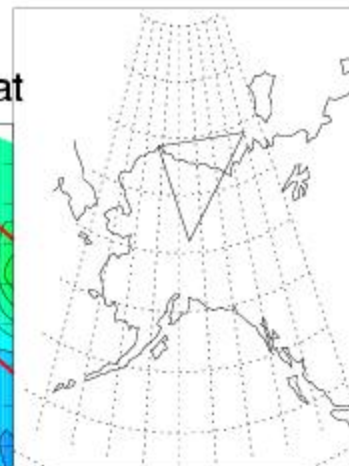
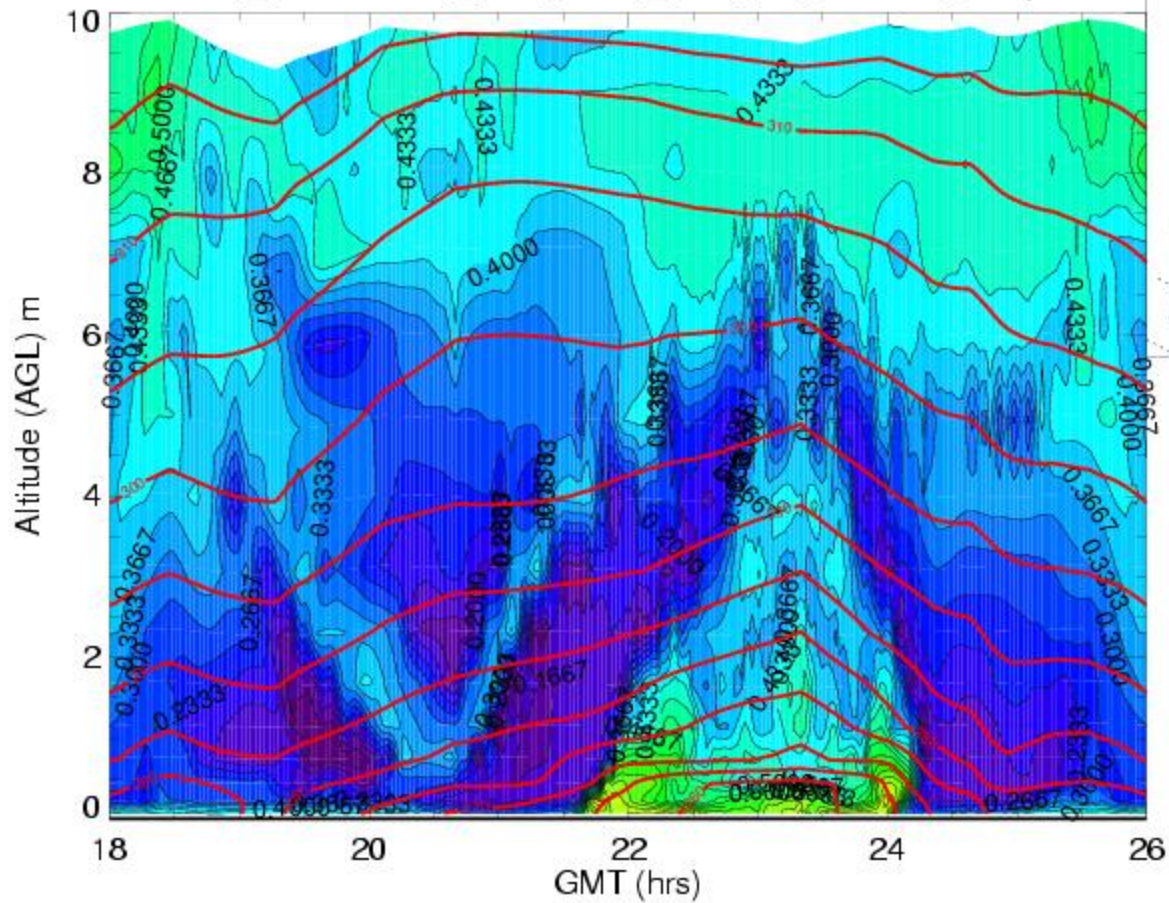




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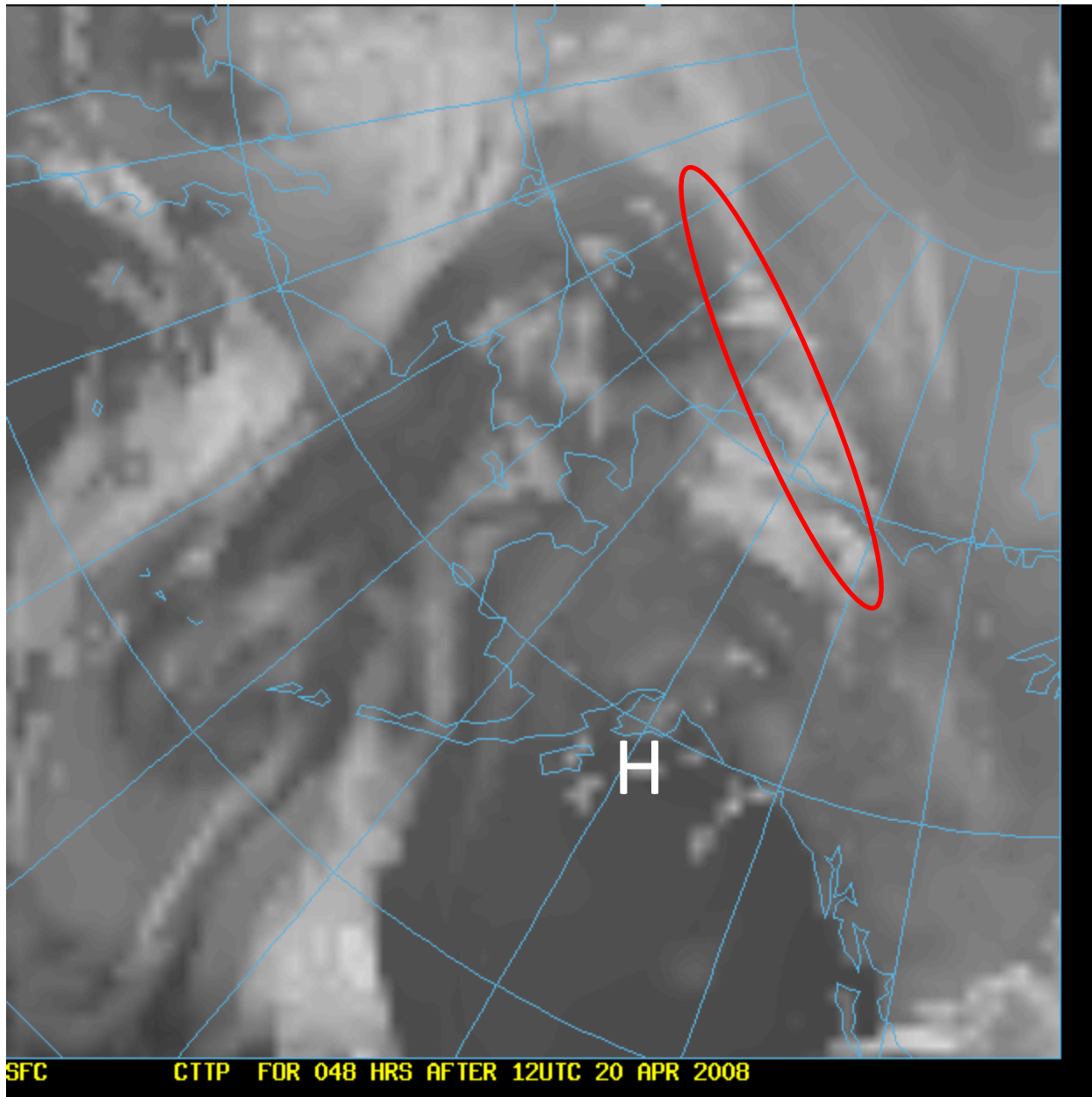


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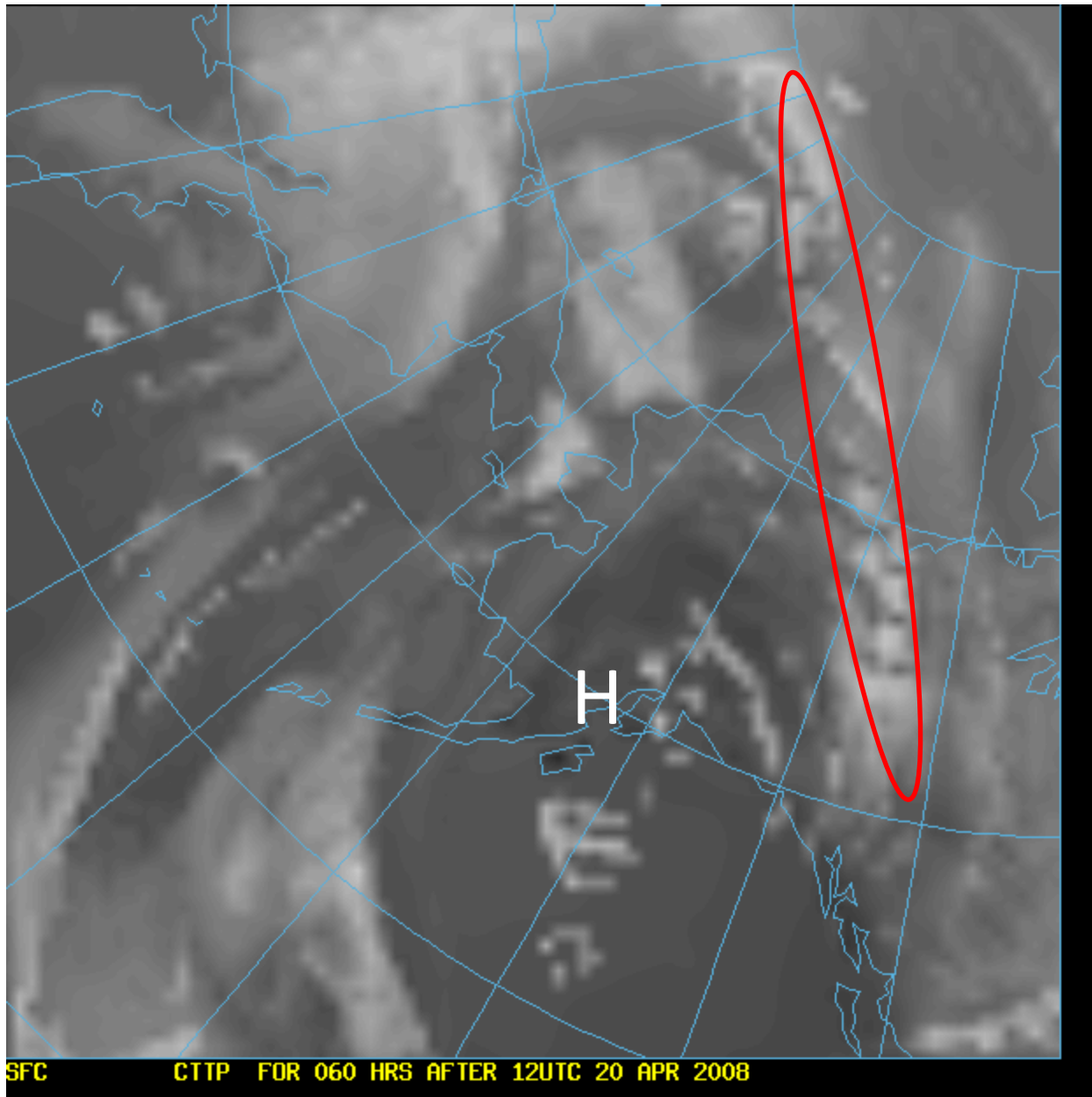




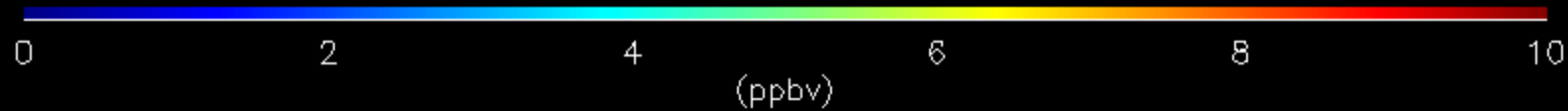
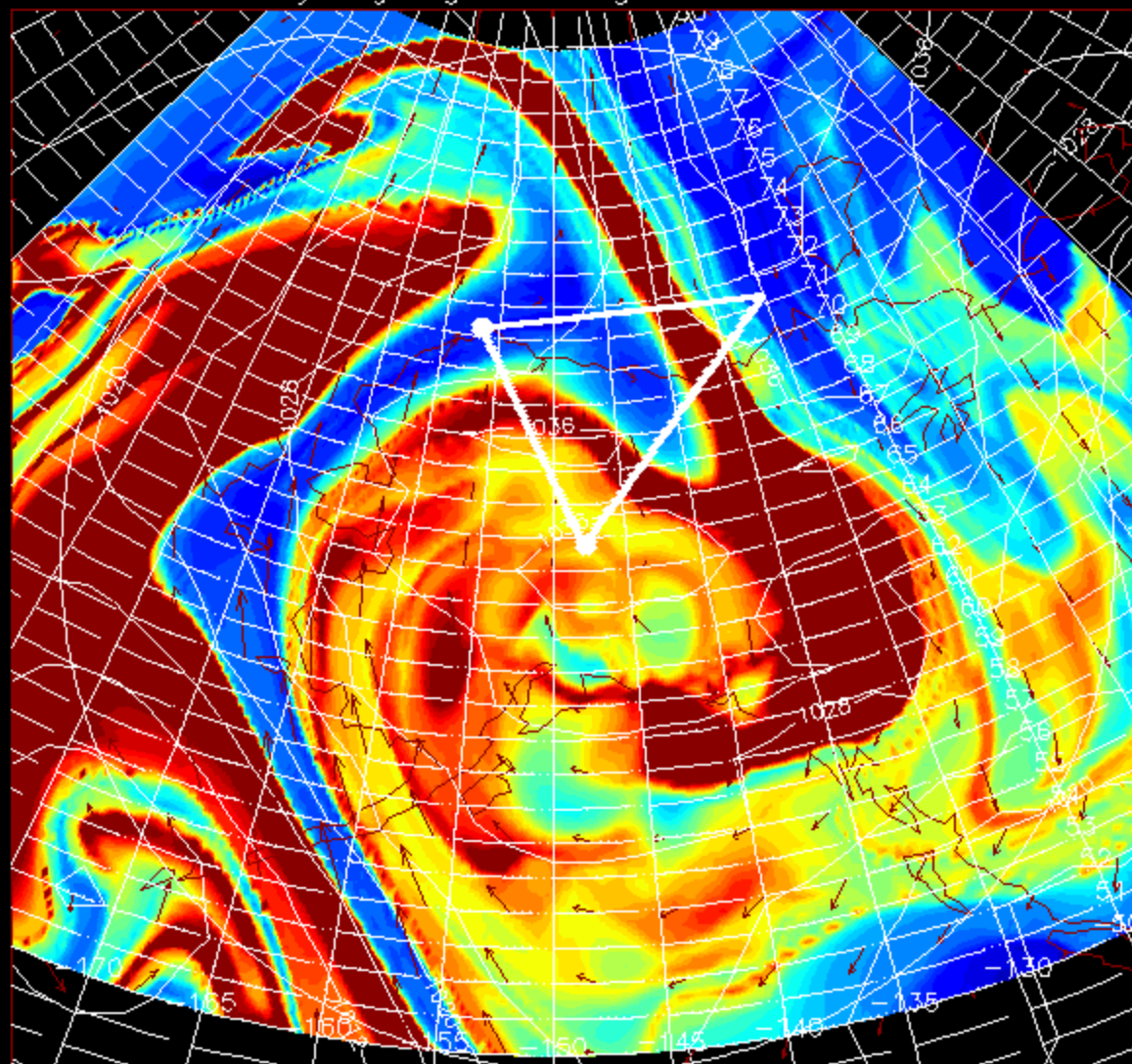
**12hr CRAS 11 micron (Vis) FX Valid 12Z 04/22/08 (Tuesday 4:00am)**



12hr CRAS 11 micron (Vis) FX Valid 00Z 04/23/08 (Tues 4:00pm)



1km 5-day Lagrangian Averaged BC+OC 2008042300



1km 5-day Lagrangian Averaged BC+OC 2008042400

